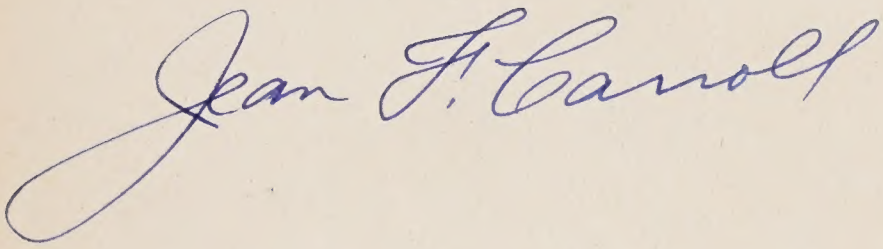


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GEORGE F. BAKER FOUNDATION
HARVARD UNIVERSITY

VOLUME 6

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FOREWORD

ALL the cases published in this volume are concerned with industrial marketing, a highly significant subject which heretofore has received altogether inadequate attention even among business men themselves. In bringing out this volume the School acknowledges especial indebtedness to the broadminded interest of the McGraw-Hill Publishing Company, Inc., the National Petroleum News, and the Penton Publishing Company for contributing the funds which made possible this first comprehensive collection of industrial marketing cases. Acknowledgment also is made of our sincere appreciation of the assistance received from the various companies which permitted their experiences to be herein recorded. This collection is not exhaustive, for much further research is needed on many of the topics dealt with in these cases and on others not yet covered. The results of further research will be published in subsequent volumes of this series.

MELVIN T. COPELAND
NEIL H. BORDEN

July, 1928

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HARVARD BUSINESS REPORTS

VOLUME 6

Erven Leather Products Company[1]

MANUFACTURER—LEATHER BELTING

Distribution Channels—*Direct Selling Combined with Use of Exclusive Distributors.* Because of its heavy sales expenses and its unsatisfactory sales volume, the company, a manufacturer of leather belting and other leather products, reviewed its marketing program critically. One question raised was the soundness of the company's policy of having the entire United States covered by its own salesmen, operating from its sales branches, and at the same time granting exclusive territories to a large number of supply firms. The company decided that this plan of direct sale supplemented by sale through exclusive distributors was basically sound and that the problem was to select the proper supply firms as exclusive distributors and to control the activities of the sales branches adequately.

Sales Control—*Introduction of Customers' and Salesmen's Reports and Records.* Because of its heavy sales expenses and its unsatisfactory sales volume, the company, a manufacturer of leather belting and other leather products, reviewed its marketing program critically. More adequate control of sales was deemed necessary. With this object in view, the company developed a system of customers' and salesmen's reports and records which, among other things, showed salesmen's sales by lines; sales in relation to traveling expenses and salaries; number and size of actual and prospective customers; customers' purchases; new customers secured; customers lost; number of salesmen's visits; and the division of salesmen's time between large and small customers. These records proved of material assistance to the company.

Sales Force Control—*Supervision of Salesmen's Routings.* As part of its general program for improving its control of its sales force, the company, a manufacturer of leather belting and other leather products, decided to institute centralized supervision of salesmen's routings. Previously, there had been no supervision of salesmen's routings, and traveling expenses had been unduly high.

Market Selection—*Discontinuance of Sales Calls upon Small Users.* An analysis of its accounts convinced the company, a manufacturer of leather belting and other leather products, that only 2,000 of its 10,000 customers bought in sufficient quantities to justify regular sales calls upon them. By discontinuing sales calls upon the large number of small customers, the company was able to make substantial reductions in its

[1] Fictitious name.

sales force without seriously jeopardizing more than a small portion of its sales volume.

MERCHANDISING—*Addition of Products to Line.* As a means of increasing its unsatisfactory sales volume, the company, a manufacturer of high-grade leather belting and other leather products, decided to add rubber belting and also metallic lacings to its line. These items would be made to the company's order by other manufacturers. Sales of the rubber belting were expected indirectly to promote sales of leather belting and also, since no added sales expense was anticipated, to lower the company's expense percentage.

MERCHANDISING—*Sales Emphasis Increased on Incidental Line.* In view of the decreases which had occurred in its sales of belting, the company, a manufacturer of leather belting and other leather products, decided to place increased sales efforts upon the cup packings which it manufactured and which, prior to that time, it had regarded as incidental to the belting. The company employed one salesman to devote his entire time to introducing the cup packings to potential users.

ADVERTISING—*Primary Buying Motives Preferred to Selective—(Commentary).* In its advertising of the leather belting that it manufactured, the company had stressed chiefly the high quality and durability of its products. One of the chief forms of competition that the company had to meet was that of manufacturers of electric motors and chain drives, who, in their advertising, emphasized the superiority of direct drives to belt drives. The commentator suggests that the greater success of the motor and chain manufacturers may have been due in part to their emphasis upon primary buying motives instead of upon selective motives, such as the company sought to appeal to.

(1925-1928)

For several years prior to 1925 selling expenses of the Erven Leather Products Company had been unduly high. In 1924, for certain of the company's sales branches, selling expenses were more than twice as large as the company was of the opinion they should be in view of the volume of sales. Sales, moreover, had decreased seriously following the close of the World War, and the trend after that time had continued downward. This situation led the company to review its sales program and to analyze carefully the activities of its sales branches. This study, in the period from 1925 to 1928, led to various major changes in the company's marketing plans.

Although the company's own salesmen, operating from the sales branches, visited all parts of the United States, the company had granted exclusive territories to over a hundred mill and factory supply firms, which it credited with all sales made in their terri-

tories. It was suggested that use of both sales branches and exclusive distributors might involve unnecessary expense. After analyzing the situation critically, however, the company concluded that the difficulty lay not in this dual method of distribution but in the lack of adequate control of salesmen's activities. A more comprehensive supervision of the sales force, in the company's opinion, not only should be effective in curtailing sales expenses but also in increasing sales.

Two other suggestions were made for improving the company's marketing position. One of these was for increased sales emphasis upon certain items which the company for many years had treated as by-products. The other suggestion was for the addition of several new products to the company's line.

The major product of the Erven Leather Products Company was leather belting for power transmission in industrial plants. Among the users of belting were cotton gins, lumber mills, cement factories, feed mills, grain elevators, machine shops, pulp and paper mills, steel mills, and textile mills. The company manufactured belting for stock in thicknesses of one to three plys and in widths of one-half inch to thirty-six inches. In 1924, about 75% of the company's sales of belting were of sizes carried in stock and about 25% were of special sizes made to customers' orders. The trend was toward a larger proportion of special orders.

The company purchased foreign and domestic hides and operated its own tannery; the manufacturing departments were charged a price for tanned hides slightly below the market price inasmuch as no selling expense was involved. From those parts of the hides not used in making belting, the company manufactured a variety of products. One group of these, made up of counters, inner soles, box toes, and welting, was sold to shoe manufacturers by a subsidiary company. The belting sales organization of the Erven Leather Products Company, however, in addition to belts, handled whole leather, lace leather, and a group of specialties including cup packings, U packings, flange packings, gaskets and washers, mill strapping, lug straps, loop pickers, staff pickers, skate straps, trunk handles, belt cement, and belt dressing. Sales of products other than belting for many years had made up a comparatively small proportion of total sales and had been given little sales attention. By 1925, however, sales of those products comprised approximately half of the company's total

sales, and it was upon certain of those items that the company proposed to lay greater sales emphasis.

The Erven Leather Products Company had been in operation for more than 50 years. During that time it had established its reputation as a manufacturer of high-grade belting. In general, Erven belts were higher in price than competing leather belts. In the executives' opinion, the differential in prices fairly represented actual differences in quality.

For selling its belting and the other products handled by the belting organization, the company, in 1925, had the United States divided into twenty territories, in each of which it maintained a branch office with stocks. The quantity of stock at each branch was controlled by the central office. Three of the company's largest branches, those at Chicago, New York, and Philadelphia, each had a manager who devoted his full time to supervising branch activities. In addition to these three branch managers, each of whom was in charge of only one store, there were four district sales managers, two of whom supervised three stores each and two of whom supervised two stores each. Each of the other seven branches was managed by one of the salesmen. In all, the company at that time had forty-seven salesmen for its belting and allied products. At the branch offices there also were stationed men qualified to extend installation and repair service to customers. Small belts usually were installed by the purchasers, but large belts frequently were installed free of charge by the company's belt repair men. Ordinarily, except when competition made it impracticable, a charge was levied for repair service. Exhibit 1 shows, for each branch for 1924, sales, average monthly inventory, annual rate of stock-turn, number of employees, and direct and indirect expenses.

In addition to the sales branches, there were in 1925 approximately 150 mill and factory supply firms selling Erven belting and allied products. In the main, each supply firm specialized on supplies for one or two industries. Some, for instance, served shoe manufacturers primarily, while others served the textile industry, and others served sugar refineries. A textile mill supply firm, for example, sold, among other things, bobbins, spools, straps, harnesses, oil, waste, grease, pulleys, hangers, and belting.

Of the 150 supply firms selling Erven products, about 135 were exclusive representatives for that line. The exclusive representa-

Exhibit 1

Average Monthly Inventories, Annual Rate of Stock-Turn, Sales Branch Personnel, and Expenses for Sales Branches of Erven Leather Products Company, 1924

Sales Branch	Average Monthly Inventory	Annual Rate of Stock-Turn	Sales Branch Personnel				Sales Branch Expense in Percentage of Gross Sales		
			Salesmen	Office Force	Stockmen Shippers Chauffeurs	Belt Repair Men	Direct*	Indirect†	Total
1	$ 49,313	2.33	5	5	..	2	10.2	7.4	17.6
2	10,306	3.21	3	2	½	½	8.3	4.5	12.8
3	44,978	3.19	4	2	1	3	7.4	6.4	13.8
4	10,873	2.05	1	1	½	½	7.6	12.2	19.8
5	24,226	4.11	3	1	1	5	4.8	8.7	13.5
6	29,443	2.28	2	1	..	1	9.3	16.0	25.3
7	37,340	4.81	3	2	1	5	6.4	3.8	10.2
8	5,041	.77	1	1	½	½	6.2	7.1	13.3
9	18,379	2.43	1	1	½	½	6.7	10.4	17.1
10	22,019	2.16	1	1	½	½	7.1	8.7	15.8
11	16,319	2.48	1	1	½	½	6.7	10.1	16.8
12	23,352	2.11	1	2	1	1	7.4	14.6	22.0
13	20,715	5.65	3	4	1	2	6.8	4.9	11.7
14	38,947	2.99	4	2	1	2	9.6	6.5	16.1
15	21,393	2.50	1	..	.	..	12.0	1.8	13.8
16	23,854	2.82	2	2	1	1	8.2	19.6	27.8
17	61,924	2.29	2	2	1	1	6.3	15.3	21.6
18	27,966	2.94	1	2	½	½	7.9	14.0	21.9
19	96,682	2.10	2	2	..	..	6.5	9.3	15.8
20‡	100,000	8.00	6	..	..	..	6.4	1.3	7.7

*Includes salaries, traveling expenses, and commissions of salesmen.

†Includes salaries of branch and district managers, wages of sales branch personnel other than salesmen, freight, rent of store, taxes, interest, insurance, postage, and light and heat if not included in rent.

‡Factory branch.

tives agreed to sell the leather belting of no other manufacturer and the Erven Leather Products Company agreed to sell its belting to no other supply firms in their territories and to credit them with any sales which its own salesmen made directly to users in their territories, as well as with orders received directly by mail from customers located there. The other supply firms selling Erven belting did not have protected territories. For the most part, those firms were small and sold comparatively little Erven belting and allied products.

The territories of the exclusive distributors varied in size from a few counties to an entire state. All the exclusive territories were included in the branch territories and the company's salesmen operating from the branch offices traveled in the distributors' territories as well as in the so-called open territories. Sometimes they traveled with the distributors' salesmen and sometimes alone. The company's salesmen were prepared to advise users as to the types and sizes of belts needed, and frequently the salesmen of the distributors asked Erven salesmen to give such advice to the distributors' customers. The distributors' salesmen usually visited their customers at least once a week. On any order which the company took in a distributor's territory to be filled directly, the distributor was allowed a commission of 5%, unless the distributor agreed to waive that allowance. Large users ordinarily preferred to deal directly with salesmen of the Erven Leather Products Company, and sometimes they objected to having any commission paid a distributor on orders which they placed directly with the company. When such an objection was a serious obstacle to securing the business of a large belt user, the Erven Leather Products Company asked the distributor in whose territory the user was located to waive his claim to a commission, explaining that unless that claim was waived the order could not be secured and neither the distributor nor the company would be profited. Usually, although not always, the distributors in such instances were willing to waive their claims to commission. The company had found that users in the South and West were more willing to buy through distributors than were users in the East.

The Erven Leather Products Company sold its products to its distributors at a discount of 15% to 70% from its list prices; the average discount was from 40% to 45%. To consumers the company gave discounts of from 10% to 60% from list prices. The

average was about 35%. The gross margin which the distributors received was influenced by competitive conditions. In districts in which competition was keen, their gross margin commonly amounted to from 5% to 10% of sales; where competition was less severe, their gross margin ranged from 20% to 25%. The Erven Leather Products Company's average gross margin on belting was 30%; the company aimed to make 7% or 8% net profit on belting sales.

The exclusive distributors of the Erven Leather Products Company, as well as many of its distributors without exclusive territories, carried stocks of the company's belting in widths which were called for frequently. About 95% of these stocks were purchased outright. A few unusual sizes were carried on consignment; the quantity of consigned stocks carried by the distributors was controlled by the company's central office. The various distributors carried stocks ranging in value from $1,000 each to $10,000 each; the typical Erven belting stock of a distributor amounted to about $4,000. Many of the distributors also carried small stocks of the company's whole leather, lace leather, and specialties.

In 1924, approximately 75% of the company's sales of belting and other products handled by the belting sales organization were made in open territories, either to users or to supply firms without exclusive territories, and about 25% were made in exclusive territories. Of the 25% made in exclusive territories, approximately 22% were made to supply firms with exclusive territories, and about 3% were made by the company's salesmen directly to users in the distributors' territories. The company did not know for what proportion of the exclusive representatives' sales its own salesmen were responsible. The trend of sales for 1922, 1923, and 1924 showed an increase in the proportion of total sales made by the company in open territories as compared with sales of the exclusive representatives. In 1922, when sales as a whole showed a gain of 13.06% over the previous year, sales of exclusive distributors showed a gain of only 3.6%. In 1923, when total sales showed a loss of 29.65%, sales of the exclusive distributors showed a 30.7% loss. In 1924, there was a gain of 8.21% in total sales but a gain of only 1% in sales of exclusive distributors.

It had seemed to the executives of the Erven Leather Products Company at various times that the work of the exclusive distribu-

tors did not warrant their use. The executives decided, however, that while this was true of certain distributors, it was not true of the distributors as a whole and that the problem was simply one of weeding out the undesirable distributors. Because of their personal relationships with users in their territories and the convenience of their stocks, the distributors, in the company's opinion, were able to secure many small orders which otherwise probably would go to local manufacturers or to large manufacturers with stocks in that locality. One large distributor, for instance, sold approximately $80,000 worth of Erven products annually. Five or six of the large distributors, moreover, employed men to provide repair service to users of Erven belts. Many of the exclusive distributors also had salesmen who were trained to sell belting; most of the exclusive distributors had sent salesmen to the company's factory for instruction in the manufacture and technical aspects of belting.

In the period from 1925 to 1928 the number of the company's exclusive distributors was reduced from about 135 to 94. The exclusive arrangements were for indefinite periods and could be terminated by either party upon 30 days' notice. In some instances this was done by the distributors and in other instances the company took the initiative. A distributor located in New York, for instance, notified the company that he intended to replace the Erven line with a cheaper line. In this case, the company decided not to seek a new distributor but to cover the territory with its own salesmen. In another instance an exclusive distributor located in Iowa with a territory of seven counties sold only $10,000 worth of Erven products in a year. The company deemed this too small a volume, and, hence, discontinued its relations with the distributor.

Competition in the sale of belts was keen. There were in the United States about 10 large manufacturers of leather belting other than the Erven Leather Products Company. Those manufacturers, like the company, sold their products by means of sales branches and exclusive distributors. In addition to the large manufacturers, there were about 170 small leather belting manufacturers who offered strong competition in local markets. An executive of the Erven Leather Products Company stated that it was not uncommon for two men with as little as $500 capital to form a partnership to manufacture leather belting. With a small

stock of leather, a workbench, a press, and some glue, they began their undertaking. Usually their belting was less uniform in quality than that made by companies with a wide variety of leather stock from which to make selection, nor was it ordinarily of so good a grade. It could be sold more cheaply, however. The owners of the business often received incomes only slightly in excess of the wages they would have received had they been working for someone else. These small belting manufacturers seldom were located outside the industrial centers.

In addition to the competition of leather belting manufacturers, the Erven Leather Products Company had to meet the competition of manufacturers of rubber and fabric belts. Fabric and rubber belts were cheaper than high-grade leather belts but they were stated to be less durable and, for many purposes, less satisfactory in use.

Another type of competition was that of manufacturers of chain drives and of manufacturers of electric motors, who sought to promote the use of direct drives in place of belt drives. The manufacturers of electric motors were aggressive in their sales methods and, according to the general sales manager of the Erven Leather Products Company, they had succeeded in introducing direct motor drives in various plants where belt drives previously had been used and, in some instances, where belt drives generally were conceded to be more suitable. A trade paper advertisement of one manufacturer of electric motors read in part:

> Electric drive cleared industry of its expensive and dangerous jungle of shafts and belts, brought great flexibility of operation, and speeded manufacture to a high pitch. Such were the economies effected that the cost of the old drives scrapped and the new motors installed never entered the picture.

Executives of the Erven Leather Products Company stated that while direct drives had certain advantages as compared with belt drives they also had certain disadvantages and that for many purposes belt drives were more satisfactory. A plant equipped with direct drives, for instance, presented a cleaner appearance than one in which belting and shafting were used, and the safety factor was perhaps greater in a direct drive plant. On the other hand, the executives of the company pointed out, repair service for electric motors was more costly than for leather belting, since for the motors the services of licensed electricians were required.

Moreover, investigation convinced the executives that the power factor was more favorable in the case of the belt drives than in the case of the motors. Many manufacturing plants made use of both direct drives and belt drives. The Erven Leather Products Company recommended use of the group drive, whereby, by means of shafting and belting, a group of machines could be operated by one electric motor or other motive power.

Inasmuch as Erven belts were higher in price than competing leather belts or than rubber and fabric belts, the company in selling them stressed their high quality, the care with which they were made, their durability, and their infrequent need of repairs. At one time the company had advertised in such periodicals as the *Saturday Evening Post* and the *Literary Digest,* but it had abandoned this advertising in favor of space in trade journals such as the *Textile World* and the *American Lumberman.* The company usually used full-page advertisements placed in preferred positions. Ordinarily the company devoted 1% of sales to advertising. A typical trade paper advertisement of Erven belting showed a picture of a man sliding pieces of leather under a revolving knife and read as follows:

> A good deal of manufacturing is automatic these days and machines that seem almost human appear to have taken a big load off the brain of man.
>
> Yet here is a machine in the Erven belting factory whose operation would be without value or purpose if it had to function unguided by a skilled operator.
>
> The simple thing the man in the picture is doing is simple only as you look at it. He is sliding pieces of leather under a swiftly revolving knife that cuts the leather into strips.
>
> This man must know leather. He must know what part of the animal each piece of leather comes from. He must know how wide a strip he can cut from each piece for every grade and belting purpose.
>
> He has been trained to know these things by learning the Erven method, based on chemical and engineering studies of the characteristics of leather and the working conditions of transmission belting.
>
> All through the Erven process you will find this exactness in control.
>
> That's why Erven belts last longer.

Several competing manufacturers of leather belting also

stressed the durability of their products. One firm in its advertising stated:

> The leather belting made by the —— Company lasts so much longer in service that it is known as the world's most economical belting.

Another belting firm advertised that "These belts will last longer because they are more pliable." One firm emphasized the efficiency of its belting in an advertisement which read in part as follows:

> As specialists in belts for textile mills, we can without doubt reduce your belting expense by furnishing —— belting for your harder and more important drives. On spinning frames —— belting gives unusual and positive grip, assuring high production, and in nearly every case an increased number of turns per minute on front rolls. On looms —— belting increases the number of picks per minute, resulting in increased production and better profits. —— belts soon pay for themselves in increased production.

In its advertisements the Erven Leather Products Company offered to send readers copies of a 170-page manual explaining how to use and care for leather belting.

In 1925 the 47 salesmen of the Erven Leather Products Company were very largely free of any direct or detailed supervision. Except when the sales manager asked a salesman to visit a specified customer who was in the market for belting, the salesmen determined their own routes and the firms upon which to call. The salesmen were expected to make daily reports on firms visited, but these reports were not received with regularity by the central office and many of the salesmen had been granted permission not to make such reports. The salesmen tended to look upon reports as a nuisance and an infringement of their personal freedom. The only complete sales records which the general sales manager had were the customers' records, which showed the purchases of each customer, whether user or distributor. No summary or recapitulation sales records were prepared regularly.

The salesmen of the Erven Leather Products Company were paid minimum salaries, known as service salaries; were allowed a fixed percentage of their sales for traveling expenses; and were credited with commissions on all orders which the company received from their territories, including orders from exclusive dis-

tributors. Salesmen's service salaries ranged from $1,000 to $3,000 annually. The traveling expenses allowed the different salesmen varied from ½ of 1% of sales to 4% of sales, the percentage depending upon the territory to be traveled. The rate of commission allowed on any order received was based upon the profitableness of the order to the company and varied according to the type of product and according to whether the purchaser was a medium-size or small user, a large user or small distributor, or a large distributor. The average rate of commission earned by a salesman was approximately 4% of sales. If, at the end of a month, the sum of a salesman's commissions and actual expenses exceeded the sum of his service salary and allowed expenses, he was paid the amount of the difference. If, on the other hand, the service salary and allowed expenses exceeded the sum of the commissions and actual expenses, the difference was charged against the salesman to be deducted from future earnings. Such charges were cumulative from month to month and year to year.

In spite of the disfavor with which sales records and reports were viewed by the salesmen, many of whom had been with the company for a long period, the executives of the company were convinced that a comprehensive system of sales force control was essential. A system was desired which would make readily available to the sales manager information as to individual salesmen's sales by lines; salesmen's sales in relation to their traveling expenses and salaries; the number and size of actual and prospective customers; new customers secured; customers lost; the number of salesmen's visits; and the division of salesmen's time between large and small users. Information as to routes followed by salesmen also was desired. Information on these points, the executives believed, should aid the sales manager materially in directing the sales force economically and effectively.

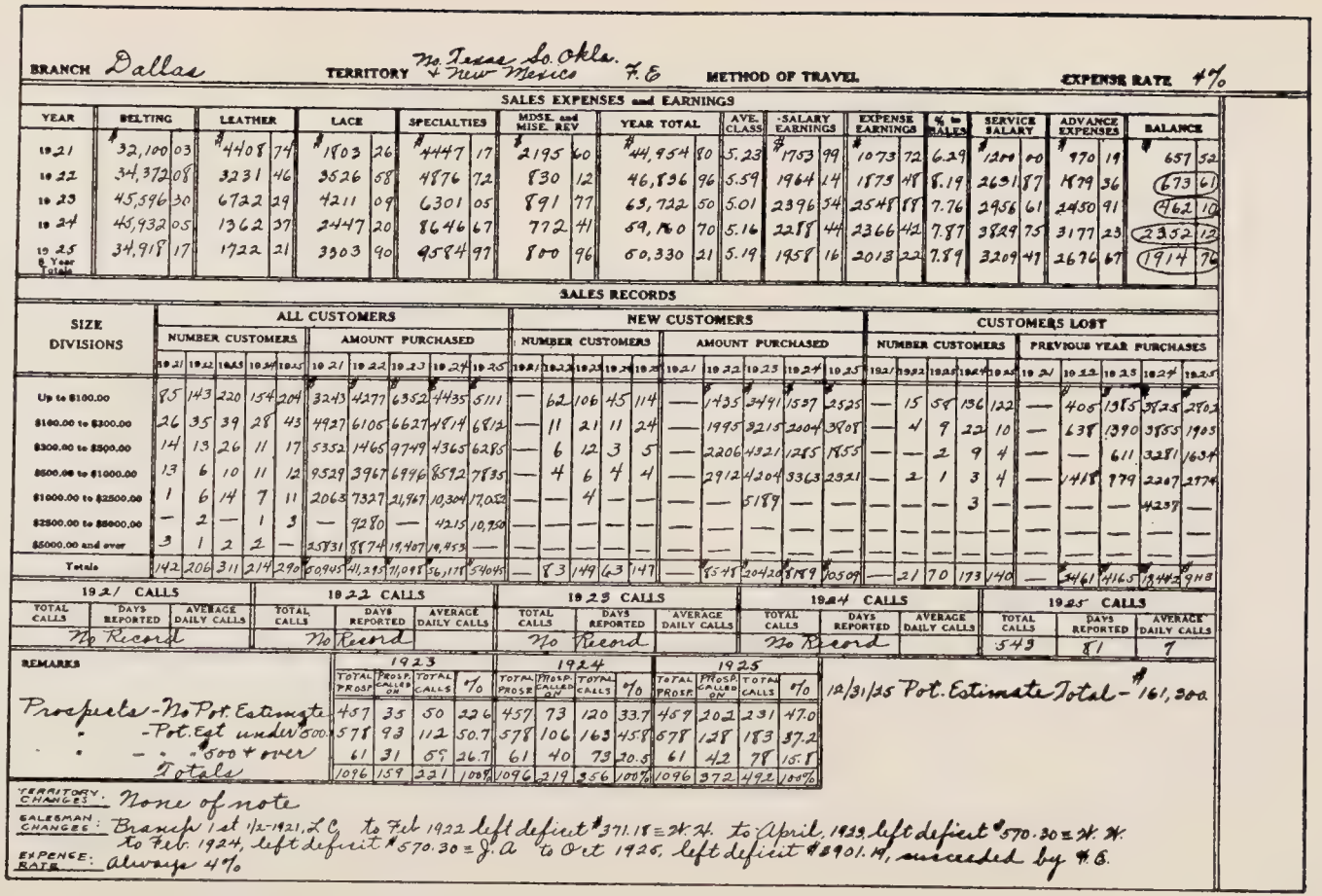
The company decided that each salesman, without exception, was to make a daily report. This report was to list the firms visited during the day, to state the type of belting or other products in which they were interested, to give the amount of the orders if orders were placed, and in the case of firms not previously visited to give an estimate, by lines, of the firms' potential annual purchases of leather belting and of other types of products sold by the company. Under the plan of sales force control which the company decided to adopt, the general manager of sales kept a

loose-leaf book in which each of the company's customers was listed, together with the names and titles of the key men in the customer's buying organization, the customer's financial rating, the type of industry, number of salesmen's calls by six months' periods, the potential yearly purchases of the customer, the customer's actual purchases by six months' periods, and pertinent remarks relative to the account. Exhibit 2 shows the form in which this information was given in the sales manager's loose-leaf book. This information was brought up to date every six months.

The estimates of potential yearly business were made by the salesmen at the beginning of each year for all existing customers and at the time of the first sales call for all new customers. When the potential purchases of a customer were thought to be less than $50 a year, no estimate in dollars was made and the customer was classified as "no potential estimate." When the plan of sales estimates first was adopted, the salesmen's estimates tended to be too low. The sales manager stated, however, that later, when the salesmen lost their fear of being held to an impossible standard and when actual sales records for a few periods were available, the salesmen's estimates became more reliable, although they still tended to be low.

For each salesman the sales manager decided to maintain a five-year summary record, such as that which is shown here in Exhibits 3 and 4. The upper third of this record showed the salesman's sales by years classified as belting, whole leather, lace leather, specialties, and miscellaneous; the average annual rate of commission earned by the salesman; his annual "salary earnings," or the amount of the commissions credited to him; his traveling expenses for the year; the percentage of his traveling expenses to sales; his service salary for the year; the traveling expenses to which his expense rate entitled him; and the "balance," that is, the amount which he received during the year in addition to his service salary and his actual expenses, or, if the balance was not in his favor, the amount charged against him for deduction from future earnings.

The middle section of this summary record showed the total number of the salesman's customers, including distributors as well as users, and the amount of their purchases. It also showed the number of customers lost and the amount of their purchases



BRANCH Dallas TERRITORY No. Texas So. Okla. + New Mexico W. E. METHOD OF TRAVEL EXPENSE RATE 4%

SALES EXPENSES and EARNINGS

YEAR	BELTING	LEATHER	LACE	SPECIALTIES	MDSE. and MISC. REV	YEAR TOTAL	AVE. CLASS	SALARY EARNINGS	EXPENSE EARNINGS	% to SALES	SERVICE SALARY	ADVANCE EXPENSES	BALANCE
1921	$32,100.03	$4408.74	$1803.26	$4447.17	$2195.60	$44,954.80	5.23	$1753.99	$1073.72	6.29	$1200.00	$970.19	657.52
1922	34,372.08	3231.46	3526.68	4876.72	830.12	46,836.96	5.59	1964.14	1875.48	8.19	2691.87	1479.36	(673.61)
1923	45,596.30	6722.29	4211.09	6301.05	891.77	63,722.50	5.01	2396.54	2548.88	7.76	2956.61	2450.91	(462.10)
1924	45,932.05	1362.37	2447.20	8646.67	772.41	59,160.70	5.16	2288.44	2366.42	7.87	3829.75	3177.23	(2352.13)
1925 6 Year Totals	34,918.17	1722.21	3303.90	9584.97	800.96	60,330.21	5.19	1958.16	2018.22	7.89	3209.47	2676.67	(1914.76)

SALES RECORDS

SIZE DIVISIONS	ALL CUSTOMERS: NUMBER CUSTOMERS 1921	1922	1923	1924	1925	ALL CUSTOMERS: AMOUNT PURCHASED 1921	1922	1923	1924	1925	NEW CUSTOMERS: NUMBER CUSTOMERS 1921	1922	1923	1924	1925	NEW CUSTOMERS: AMOUNT PURCHASED 1921	1922	1923	1924	1925	CUSTOMERS LOST: NUMBER CUSTOMERS 1921	1922	1923	1924	1925	CUSTOMERS LOST: PREVIOUS YEAR PURCHASES 1921	1922	1923	1924	1925
Up to $100.00	85	143	220	154	204	3243	4277	6352	4435	5111	—	62	106	45	114	—	1435	3491	1537	2525	—	15	58	136	122	—	408	1385	3825	2502
$100.00 to $300.00	26	35	39	28	43	4927	6106	6627	4814	6812	—	11	21	11	24	—	1995	3215	2004	3808	—	4	9	22	10	—	638	1390	3585	1905
$300.00 to $500.00	14	13	26	11	17	5352	1465	9749	4365	6285	—	6	12	3	5	—	2206	4921	1285	1855	—	—	2	9	4	—	—	611	3281	1634
$500.00 to $1000.00	13	6	10	11	12	9529	3967	6996	8592	7835	—	4	6	4	4	—	2912	4204	3363	2921	—	2	1	3	4	—	1418	979	2207	2774
$1000.00 to $2500.00	1	6	14	7	11	2063	7327	21,967	10,304	17,052	—	—	4	—	—	—	—	5189	—	—	—	—	—	3	—	—	—	—	4237	—
$2500.00 to $5000.00	—	2	—	1	3	—	9280	—	4215	10,750	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
$5000.00 and over	3	1	2	2	—	25831	8874	19,407	19,453	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Totals	142	206	311	214	290	50945	41,295	71,098	56,178	54045	—	83	149	63	147	—	8548	20420	8189	10509	—	21	70	173	140	—	3461	4165	13442	9148

1921 CALLS: TOTAL CALLS	DAYS REPORTED	AVERAGE DAILY CALLS	1922 CALLS: TOTAL CALLS	DAYS REPORTED	AVERAGE DAILY CALLS	1923 CALLS: TOTAL CALLS	DAYS REPORTED	AVERAGE DAILY CALLS	1924 CALLS: TOTAL CALLS	DAYS REPORTED	AVERAGE DAILY CALLS	1925 CALLS: TOTAL CALLS	DAYS REPORTED	AVERAGE DAILY CALLS
No Record			No Record			No Record			No Record			549	81	7

REMARKS

	1923 TOTAL PROSP.	1923 PROSP. CALLED ON	1923 TOTAL CALLS	1923 %	1924 TOTAL PROSP.	1924 PROSP. CALLED ON	1924 TOTAL CALLS	1924 %	1925 TOTAL PROSP.	1925 PROSP. CALLED ON	1925 TOTAL CALLS	1925 %
Prospects - No Pot. Estimate	457	35	50	22.6	457	73	120	33.7	457	202	231	47.0
" - Pot. Est under $500.	578	93	112	50.7	578	106	163	45.8	578	128	183	37.2
" - " $500 + over	61	31	59	26.7	61	40	73	20.5	61	42	78	15.8
Totals	1096	159	221	100%	1096	219	356	100%	1096	372	492	100%

12/31/25 Pot. Estimate Total - $161,200

TERRITORY CHANGES: None of note

SALESMAN CHANGES: Branch 1st 1/2-1921. L C to Feb 1922 left deficit $371.18 = H. H. to April, 1923 left deficit $570.30 = H. H. to Feb. 1924, left deficit $570.30 = J. A to Oct 1926, left deficit $8901.14, succeeded by W. B.

EXPENCE RATE: always 4%

Exhibit 3: Salesman's summary record for northern Texas territory, Erven Leather Products Company, 1921-1925

BRANCH Dallas TERRITORY Southern Texas a.A. METHOD OF TRAVEL EXPENSE RATE 4%

SALES EXPENSES and EARNINGS

YEAR	BELTING	LEATHER	LACE	SPECIALTIES	MDSE. and MISC. REV.	YEAR TOTAL	AVE. CLASS	SALARY EARNINGS	EXPENSE EARNINGS	% to SALES	SERVICE SALARY	ADVANCE EXPENSES	BALANCE
1921	$31,018 18	$1874 76	$2067 33	$3747 98	$3463 80	$43,171 95	4.69	$1519 77	$1726 87	7.52	$1754 08	$2630 40	($1137 84)
1922	45,637 99	1527 53	4566 44	3719 61	649 90	56,101 27	4.64	1952 94	2200 49	7.40	2117 85	2167 07	(131 49)
1923	63,407 59	1382 75	7050 21	3993 71	772 07	76,606 33	4.40	2525 99	3064 24	7.30	1800 24	2289 26	1500 73
1924	48,010 18	1723 43	3853 01	2869 02	2058 56	58,514 20	4.69	2058 82	2340 68	7.52	1834 86	2221 95	342 59
1925	41,918 38	956 44	4118 98	4332 60	(146 53)	51,179 87	4.78	1834 70	2047 19	7.58	1984 72	2158 24	(261 07)
5 Year Totals													

SALES RECORDS

SIZE DIVISIONS	ALL CUSTOMERS — NUMBER CUSTOMERS					ALL CUSTOMERS — AMOUNT PURCHASED				
	1921	1922	1923	1924	1925	1921	1922	1923	1924	1925
Up to $100.00	47	69	159	120	107	$1548	$3208	$4120	$3373	$2719
$100.00 to $300.00	15	12	33	32	22	2773	1909	5785	6113	3342
$300.00 to $500.00	4	7	8	9	3	1424	2753	3048	3614	1269
$500.00 to $1000.00	2	5	6	4	4	1378	2996	3745	2862	3029
$1000.00 to $2500.00	1	3	3	2	2	1205	3882	4651	4571	2533
$2500.00 to $5000.00	—	2	3	1	1	—	6593	7813	2825	3202
$5000.00 and over	2	2	3	3	3	5648	24258	48008	39341	33059
Totals	71	100	215	171	142	$16,976	$44,629	$77,170	$62,697	$50,153

SIZE DIVISIONS	NEW CUSTOMERS — NUMBER CUSTOMERS					NEW CUSTOMERS — AMOUNT PURCHASED				
	1921	1922	1923	1924	1925	1921	1922	1923	1924	1925
Up to $100.00	—	30	121	72	59	—	$1107	$2806	$1865	$1229
$100.00 to $300.00	—	3	20	7	9	—	513	3466	1462	1478
$300.00 to $500.00	—	3	2	3	1	—	1169	705	1190	461
$500.00 to $1000.00	—	1	3	1	—	—	525	1830	662	—
$1000.00 to $2500.00	—	1	2	—	1	—	1458	2741	—	2316
$2500.00 to $5000.00	—	—	1	—	—	—	—	2662	—	—
$5000.00 and over	—	—	—	—	—	—	—	—	—	—
Totals	—	38	149	83	70	—	$4772	$14,210	$5179	$5484

SIZE DIVISIONS	CUSTOMERS LOST — NUMBER CUSTOMERS					CUSTOMERS LOST — PREVIOUS YEAR PURCHASES				
	1921	1922	1923	1924	1925	1921	1922	1923	1924	1925
Up to $100.00	—	8	32	104	88	—	$392	$814	$2272	$2226
$100.00 to $300.00	—	2	1	17	14	—	402	361	2946	2601
$300.00 to $500.00	—	—	1	2	5	—	—	544	655	2021
$500.00 to $1000.00	—	—	—	1	1	—	—	—	621	622
$1000.00 to $2500.00	—	—	—	—	—	—	—	—	—	—
$2500.00 to $5000.00	—	—	—	—	—	—	—	—	—	—
$5000.00 and over	—	—	—	—	—	—	—	—	—	—
Totals	—	10	34	124	108	—	$794	$1719	$6494	$7470

1921 CALLS			1922 CALLS			1923 CALLS			1924 CALLS			1925 CALLS		
TOTAL CALLS	DAYS REPORTED	AVERAGE DAILY CALLS	TOTAL CALLS	DAYS REPORTED	AVERAGE DAILY CALLS	TOTAL CALLS	DAYS REPORTED	AVERAGE DAILY CALLS	TOTAL CALLS	DAYS REPORTED	AVERAGE DAILY CALLS	TOTAL CALLS	DAYS REPORTED	AVERAGE DAILY CALLS
No Record			No Record			652	108	6	643	131	5	518	88	6

REMARKS

	1923 TOTAL PROSP.	1923 PROSP. CALLED ON	1923 TOTAL CALLS	1923 %	1924 TOTAL PROSP.	1924 PROSP. CALLED ON	1924 TOTAL CALLS	1924 %	1925 TOTAL PROSP.	1925 PROSP. CALLED ON	1925 TOTAL CALLS	1925 %
Prospects - No Pot. Estimate	420	151	220	26.8	420	61	97	22.2	420	126	159	34.0
" - Pot. Est under $500.	486	296	461	56.2	486	155	238	54.5	486	162	231	49.5
" - " $500 & over	60	52	139	17.0	60	40	102	23.3	60	37	77	16.5
Totals	966	499	820	100%	966	256	437	100%	966	325	469	100%

12/31/25 Potential Estimate Total - $152,700

TERRITORY CHANGES: None of note

SALESMAN CHANGES: H. L. to Feb. 1922 succeeded by M. H. to July 1922, left deficit $735.70; succeeded by A. H.

EXPENCE RATE: Always 4%

Exhibit 4: Salesman's summary record for southern Texas territory, Erven Leather Products Company, 1921-1925

in the previous year. A customer was counted as lost who made no purchases during a calendar year. In this section of the record customers were classified in seven groups according to the amount of their purchases.

The lower section of the five-year record was divided in two parts. The upper part gave the total number of calls made by the salesman, the number of days on which reports were received from him, and the average number of calls per day. The lower part of this section showed the number of actual or prospective customers for whom no estimate of potential purchases had been made, chiefly very small users; the number of actual or prospective customers for whom the estimate was less than $500; the number for whom the estimate was $500 or more; the number of firms called upon in each of these classes, and the total number of calls made upon each class. This part of the summary record was of particular assistance to the sales manager in that it gave him an indication of how the salesmen were dividing their time between large and small customers.

On the back of the summary record all customers buying more than $2,500 worth of Erven products annually were listed, together with their locations, the type of industry, and the amount of their annual purchases.

Exhibits 3 and 4 show the summary sales record filled out for the period 1921 to 1925 for the two salesmen who had their headquarters at the company's sales branch in Dallas, Texas. The territory of the salesman whose record is shown in Exhibit 3 included northern Texas, southern Oklahoma, and New Mexico. The territory of the salesman whose record is given in Exhibit 4 comprised southern Texas. When the company adopted this form of records, in 1925, it had the figures for the preceding four years entered also, so that summary data for five years were available.

The summary records for the Dallas territory showed that as a rule the commission earnings of neither salesman were sufficient to meet the minimum salary allowed him by the company. Various salesmen had been tried in these territories, but always with the same result. In the northern territory, for instance, a salesman employed in January, 1921, left in February, 1922, with a balance against him of $370; his successor left in April, 1923, with a deficit of $570; the next salesman tried in the territory left in February, 1924, also with a charge of $570 against him; the

man who replaced this salesman left in October, 1925, with a deficit of $3,900. Several changes also had occurred in the southern territory.

As the situation did not improve materially in 1926, the company concluded that the Dallas territory could not support two salesmen. In the summer of 1927, therefore, the northern and southern sections of the territory were consolidated and one of the salesmen was removed. The tendency toward consolidation of territories also manifested itself elsewhere. This enlargement of territories was made possible by improved control over salesmen's activities and routings and by the company's decision to discontinue sales calls upon a large number of its small customers.

In December, 1927, from the information which the new sales records made available, the sales manager made an analysis of the company's accounts to determine which were profitable. At that time the company had approximately 10,000 customers for belting and allied products and had an annual sales volume of about $4,500,000. The analysis revealed the fact that of the 10,000 customers, 6,600 each purchased less than $100 worth of Erven merchandise annually ; 1,800 each purchased from $100 to $300; and the purchases of each of 2,000 customers amounted to $300 or more a year. The 2,000 customers in this last group accounted for approximately $4,000,000 of the total volume of $4,500,000; whereas the 6,600 customers each of whom purchased less than $100 a year accounted for but $180,000 of the company's sales. Erven salesmen, however, had been calling regularly upon these small customers. The sales manager found in one instance that a salesman had made 27 calls upon a customer for $300 worth of business.

This analysis convinced the sales manager that the salesmen were devoting altogether too much time to the small accounts. In his opinion, it was impractical to call regularly upon those customers whose annual purchases amounted to less than $300. The sales manager was confident, moreover, that a large part of the small business would continue to come to the company even if the salesmen did not solicit the orders. In accordance with these conclusions, the sales manager removed 5 men from the sales force and planned to remove 6 more in January, 1928. The annual expenses and service salaries of these 11 men amounted to $50,000. In 1925 the company had had 20 sales branches, 47 sales-

men, 3 branch managers, and 4 district managers. In December, 1927, after the removal of the 5 men, there were, for the 21 sales branches which the company had at that time, 44 salesmen and 3 district managers; each branch was under the supervision of one of the salesmen. The salesmen in charge of the branch offices were expected to make enough sales to cover, at the usual rates of commission, 75% of their minimum salaries; the other 25% was charged to administrative expense.

In 1925, when the company undertook to examine critically its marketing situation, it had found that the salesmen as a rule were routing their visits uneconomically. Most of the traveling was done by automobile. Investigation showed that it was not uncommon for a salesman to drive 30 or 40 or 50 miles from his headquarters to visit certain customers, to return at night, and then to go over the same road the next day to visit firms located a few miles from those visited the previous day. Often, moreover, the salesmen lived outside of their territories.

The general sales manager decided to have all salesmen, in so far as possible, live near the center of their territories. Further, each salesman was to map out, for the approval of the sales manager, a series of routes by which he could economically cover his territory. It was recommended that each route should extend from the salesman's headquarters into the surrounding territory and back in the shape of a leaf with two indentations in its outer edge, to allow access to the center of the area included in that route. The routes planned by each salesman were given code numbers. At the beginning of each year, each salesman indicated on a form, such as is shown here as Exhibit 5, the route which he expected to travel each week of the year. Some routes required several weeks to travel and others took only one week or less. This route plan was flexible and was subject to change by the sales manager or by the salesman for good cause. On all except very small customers, the salesmen were expected to call at least twice a year. The salesmen solicited orders on these visits, but the larger part of the orders from their territories were received by mail. On their sales visits, the salesmen were expected to interview the master mechanics, superintendents, or other officials in charge of actual use of belting.

The company further decided to make an effort to secure the business of firms building new plants or expanding old ones.

EXHIBIT 5

SALESMEN'S ROUTE FORM, ERVEN LEATHER PRODUCTS COMPANY

A. D. BROWN

	1926					1927			
Months	1st Week	2nd Week	3rd Week	4th Week	Months	1st Week	2nd Week	3rd Week	4th Week
Jan.					Jan.				
Feb.					Feb.				
Mar.					Mar.				
April					April				
May					May				
June					June				
July					July				
Aug.					Aug.				
Sept.					Sept.				
Oct.					Oct.				
Nov.					Nov.				
Dec.					Dec.				

Prior to this time it had been the company's opinion that the advice of its salesmen as to types of machinery to install had little influence with potential belt users who were building new plants or remodeling existing plants. The sales manager, however, decided to follow trade publications in order to determine the firms that were contemplating building projects and to learn the names of the engineers and architects in charge. Erven salesmen then were notified and were expected to visit the engineers, architects, and interested firms and report to the company. At stated intervals the sales manager followed up the salesmen in regard to this work.

During the two years following its inauguration of detailed supervision of the activities of its sales force, the company was able to make substantial reductions in sales expenses. Part of these reductions came through decreases made in the number of salesmen, clerical workers, shippers, stockmen, and chauffeurs at the branch offices; part resulted from the use of salesmen as

branch managers; part resulted from rent reductions following removal of branch stocks to low-rent districts; part resulted from reductions in branch inventories; and part resulted from decreases in salesmen's traveling expenses. Exhibit 6 shows average monthly inventories and annual rate of stock-turn for the branches for 1925 and 1926. Exhibit 7 shows direct and indirect

EXHIBIT 6

AVERAGE MONTHLY INVENTORIES AND ANNUAL RATE OF STOCK-TURN, ERVEN LEATHER PRODUCTS COMPANY, 1925 AND 1926

1925			1926		
Sales Branch	Average Monthly Inventory	Rate of Stock-Turn	Sales Branch	Average Monthly Inventory	Rate of Stock-Turn
1	$48,300	1.85	1	$39,347	2.70
2	9,569	3.65	2	8,973	3.54
3	52,187	3.68	3	40,996	3.83
4	7,747	2.35	4	8,038	1.78
5	18,736	4.21	5	19,019	3.22
6	28,617	1.31	6	34,872	1.42
7	33,281	5.33	7	33,111	5.30
8	6,243	0.82	8	6,783	1.22
9	16,425	2.98	9	15,033	2.72
10	15,922	3.51	10	15,486	3.00
11	15,166	3.13	11	14,629	2.87
12	18,630	2.10	12	18,290	2.07
13	19,538	4.29	13	17,738	3.78
14	35,170	3.23	14	23,840	3.32
15	21,914	2.00	15	17,886	2.13
16	22,696	4.10	16	29,542	2.65
17	59,907	2.36	17	52,784	2.11
18	27,263	1.18	18	19,321	1.66
19	69,114	1.68	19	62,894	1.93
20*	.....	....	20	13,178	.26
21†	.....	....	21	.....	....

*Opened in 1926.
†Factory Branch.

expenses in percentage of sales for the first 36 weeks of 1927. The company's immediate goal was direct sales expense of 5.5% of sales and indirect expense of 5% of sales. When this goal was achieved, the company intended to set a new and lower goal for expenses.

Reductions in the company's sales expenses had not been accompanied by increases in sales. According to an investigation made by a national belting association in 1924, the long-time trend of leather belting sales had been horizontal from 1914 to 1924. The executives of the Erven Leather Products Company attributed the

EXHIBIT 7

EXPENSES OF SALES BRANCHES OF ERVEN LEATHER PRODUCTS COMPANY IN PERCENTAGE OF GROSS SALES, FIRST 36 WEEKS, 1927

SALES BRANCH	EXPENSES IN PERCENTAGE OF GROSS SALES			SALES BRANCH	EXPENSES IN PERCENTAGE OF GROSS SALES		
	Direct*	Indirect†	Total		Direct*	Indirect†	Total
1	7.3	7.0	14.3	11	6.4	6.5	12.9
2	5.8	2.6	8.4	12	10.1	12.6	22.7
3	7.1	5.0	12.1	13	5.2	2.9	8.1
4	4.5	6.0	10.5	14	9.0	3.9	12.9
5	8.3	10.4	18.7	15	10.5	1.4	11.9
6	8.0	9.4	17.4	16	7.1	19.5	26.6
7	6.8	4.8	11.6	17	3.9	16.7	20.6
8	6.0	5.2	11.2	18	6.8	11.4	18.2
9	7.0	10.8	17.8	19	5.3	7.7	13.0
10	7.3	8.1	15.4	20‡	13.0	17.1	30.1
				21§	5.5	1.1	6.6

*Includes salaries, traveling expenses, and commissions of salesmen.

†Includes 25% of expense for salesmen serving as branch managers, wages of sales branch personnel other than salesmen, freight, rent, taxes, interest, insurance, postage, and light and heat if not included in rent.

‡This branch was opened in 1926.

§Factory office.

shrinkage in sales of Erven leather belting in part to general business conditions and in part to increased use of direct motor drives. At the close of 1927 the sales manager had sent to each salesman a statement of the shrinkage in the purchases of the customers seen by that salesman and had asked the salesman to supply an explanation of the shrinkage. On the basis of the reply to this request, the "remarks" on the customers' loose-leaf record sheets, and his own observations, the sales manager estimated that 10% of the shrinkage in the company's sales of leather belting in 1927 could be attributed to the competition of direct drives.

In view of the severe competition which its belting was meeting and the accompanying reduction in sales volume, the Erven Leather Products Company decided in December, 1927, as a means of increasing its total volume, to place increased sales efforts upon certain of its products other than leather belting and also to add two new products to its line. The product upon which the company proposed to increase the sales emphasis first was cup packings. Existing sales of cup packings amounted to $350,000 annually. The larger part of those sales were made to machinery manufacturers who used the packings as fabricating parts with

their machines. Most of these sales were made directly. The company's exclusive distributors sold packings chiefly for replacements.

The company's first step in developing the market for its cup packings more intensively was to locate potential customers upon whom its salesmen had not previously called. The company found 70 such users with combined estimated purchases of from $278,000 annually to $568,000 annually. For visiting these potential customers, the Erven Leather Products Company employed one salesman who was to devote his entire time to that work. Later, when this market had been more adequately cultivated, sales of cup packings might be cared for by the salesmen selling the other lines.

The two products which the company proposed to add to its line were metallic lacings, used by many firms in place of lace leather, and rubber belting. The company would not manufacture these products but would affiliate with itself firms that were manufacturing them. The products would be sold under the Erven name. The sales manager of the Erven Leather Products Company stated that there were only two firms in the United States manufacturing metallic lacings.

The decision to add rubber belting to the line was made only after serious debate. For years the company in its advertisements and through its salesmen had talked of the superiorities of leather belting and, for most purposes, the executives were convinced that leather belting was superior. For some uses, around acids for instance, where the life of a belt in any case would be short, the company had not recommended use of leather belting. The chief sales argument for rubber belting, in the company's opinion, was its lower initial cost as compared with leather belting. The sales manager based his decision to add rubber belting to the company's line primarily upon three things: large quantities of rubber belting were being used and if the Erven Leather Products Company could secure a reasonable portion of this business without increasing its sales force its sales expense percentage would be lowered; many firms using both rubber belting and leather belting would prefer to buy from a company selling both lines; and sales of rubber belting might serve as an entering wedge leading ultimately to sales of leather belting. The company did not plan to advertise its rubber belting.

COMMENTARY: In its broad aspects, and also in detail, the marketing problem of the Erven Leather Products Company was similar to the marketing problem which confronts many other American manufacturers, especially those in industries which have passed the stage of rapid expansion. The company's problem in broadest terms was to maintain volume of sales and to reduce marketing expenses.

The diagnosis of that broad problem indicates that questions regarding the following topics arose: relations with distributors; extent to which direct sales methods should be used; control of sales force; method of paying salesmen; segregation of marketing organization; analysis of sales records to ascertain where effort was being wasted; competition with other manufacturers of similar products; competition with manufacturers of other products used for similar purposes; addition of new lines of products; and advertising. Some of these questions were clearly and forcefully recognized by the company, whereas little attention seems to have been given to others.

Inasmuch as the company sold well over one-half of its belting directly to users, it was in a position to govern its relations with its distributors pretty much according to its own needs. It is significant, therefore, that the company had determined to grant exclusive franchises for specified territories to the distributors who secured the bulk of the orders not obtained by the company's own salesmen. The reasons why selected distribution rather than intensive distribution was needed were the requirement of special attention to the technical qualities of the product in promoting sales, the assortment of sizes and types of belting which a distributor must carry in stock, thus rendering duplicate inventories prohibitively expensive, and the requirement of installation and repair service.

As is usual in such cases, the company found it expedient to allow the exclusive distributors their regular discount, in most instances, on goods which the company sold directly to users located in the protected territories. Since such sales amounted to only 3% of the company's total sales, the cost was not a heavy price to pay for preventing friction and for preserving goodwill.

The reduction in the number of exclusive distributors from 135 in 1924 to 94 in 1928 was the result of a sane and open-minded evaluation of the services which each distributor was rendering. This reduction, furthermore, did not necessarily portend a decline in sales by distributors. In fact, the decision of the company to have its salesmen cease calling upon 8,400 customers whose annual purchases were small afforded an opportunity for distributors to increase their sales in open territories.

The soundness of the company's policy of selling belting directly to large users is substantiated by the fact that the volume of sales was

better maintained by the company's own salesmen than by distributors. Furthermore, when the changes in the company's sales plans had been put into effect, the company's marketing expense for its direct sales should have been no higher than the margin of the distributors.

While the policy of selling belting directly to large users may be accepted, therefore, as appropriate in this case, the merits of marketing in the same way the various supplies made by the company are not so obvious. These supplies comprised such items as packings, gaskets, and washers, lug straps, and so on. The possibility that intensive distribution of these items, or of some of these items, by supply firms would have yielded better results than were obtained under the existing plan of sales, deserved more careful analysis than the company apparently had made of the problem.

The arrangements under which the sales force operated prior to 1925 were typical of the lack of sales management in many companies, especially in the industrial marketing field.[2] The company's salesmen prior to 1925 had a good deal of freedom in arranging their routes. They were permitted to be lax in making reports on calls; and the company prepared no regular summaries or recapitulations of its sales figures.

The system of reports and records which the company inaugurated in 1925 furnished invaluable information for the formulation of management policies and for intelligent sales control. There may be some differences of opinion as to the satisfactoriness of the forms in certain details, but those questions are immaterial from a broad standpoint; the system served its chief purposes adequately. When the facts became available from these records, the conclusions to consolidate certain salesmen's territories and to control the routing of salesmen more carefully were logical.

In the operation of its sales branches the company was exercising a close control of expenses, studying location problems, and controlling branch warehouse stocks from the home office[3]—sound policies which were firmly established in this company's practice.

On the subject of the segregation of the marketing organization, reference already has been made to the question of using a plan for marketing supplies different from the one used for marketing belting. More need not be said on that here. It is significant, however, that the company had deemed it wise to establish a subsidiary company for marketing shoe materials and to employ a specialty salesman for introducing cup packings more widely.

The company's merchandising policy, as exemplified by the increased sales attention given cup packings and by the addition of metallic lacings and rubber beltings to its line, implies numerous questions of

[2] See Munro-Cliff Company, page 245; Boden Paper Company, page 283; Antrim Paper Company, page 288; Exton Gear Company, page 56.

[3] See Roark Saw Works, 2 H. B. R. 502.

sales organization and selling methods, as well as questions pertaining to the fundamental determination of the policy itself. This seems to have been a field, however, in which the company was feeling its way without having made a thoroughgoing study of the matter.

One of the two topics of major significance in this case is the analysis of the company's sales records and the consequent decision of the company to have its salesmen cease calling upon customers whose annual purchases were less than $300 each.[4] The analysis showed that, roughly, 90% of the company's sales were made to 20% of its customers. Stated otherwise, the company sold $4,000,000 worth of merchandise to 2,000 customers and $500,000 worth of merchandise to 8,400 customers; four times the effort for one-eighth as great results. An analysis of the data for the individual districts shown in Exhibits 3 and 4 indicates that in the northern Dallas district in 1925 there were among a total of 290 customers 204 customers whose average annual purchases were $25 each, while the average annual direct selling expense per customer in that district also amounted to $25. In the southern Dallas district, for 107 out of a total of 142 customers the average annual purchases amounted to $25.41 and the average annual direct selling expense per customer in the district to $28.39. Under such circumstances selling expense percentages inevitably were high.

Since nearly as much sales effort was spent on many a small customer as on a large customer, the company, by discontinuing sales efforts on small customers, could make a material reduction in its selling expense, without jeopardizing more than 10% of its sales.

The analysis crystallized the company's main task in selling belting as one of dealing effectively with the 2,000 large purchasers on its books and with other prospective large purchasers. The company had not aimed its sales organization and its sales plans at that objective prior to 1928; hence substantial changes were necessary. The first change took the form of a reduction in the number of salesmen employed. A conscious pursuit of the revised objective was certain, however, to lead to other important modifications of the company's selling and sales promotion methods.

One question that seemed likely to arise out of the change in the company's marketing objective was that of the method of paying salesmen.[5] The use of the guaranteed minimum salary and commission plan may have been satisfactory under the conditions that existed prior to 1928. The rates of pay that were applicable to sales to customers whose annual purchases predominantly were less than $300 each, however, were hardly likely to prove satisfactory, from the company's standpoint, when the salesmen were selling only to large customers.

[4] See also Multiprint Company, page 29.

[5] See also Paley Truck Company, page 252; J. P. Shaftesbury Company (A), page 259; and Arnold Machinery Company, page 263.

The other topic of major significance in this case related to the company's competition with other manufacturers and the manner in which advertising was employed in meeting that competition. Keen competition was encountered from other manufacturers of belting, some of whom were of the "shoestring" type. The fact that the belting market was one in which sales were not expanding made this competition particularly severe. The Erven Leather Products Company was directing its efforts primarily in its advertising and in its selling toward meeting this competition from other belting manufacturers. This fact was evidenced by the emphasis, in the company's advertisement quoted, on the longer life of Erven belts and by its booklet on the care of leather belts.

The company had begun to give some attention to the competition of other types of power transmission equipment but it seems not to have grasped the fact that one of its major tasks was to meet that competition. The manufacturers of electric motors and chain drives were stressing in their advertising the merits of those types of power transmission and incidentally referring to the merits of their particular makes of equipment. They were emphasizing primary buying motives, whereas the Erven Leather Products Company and other belting manufacturers were attempting to appeal only to selective motives. The manufacturers of electric motors and chain drives were meeting with so much success that they were selling their equipment in some instances for purposes for which belts were better suited.

The problem in selling belts for new construction was primarily one of selling that type of power transmission. Apparently the Erven Leather Products Company had not made much headway in influencing companies planning new construction to buy its belts, and it may be presumed that one reason for this inferior attainment was the emphasis placed on Erven belts, when the potential customers were more interested in the question of whether to use belts or motors.

This case affords an excellent example of the interdependence of distribution, merchandising, selling, sales promotion, and advertising policies. The company had made notable progress in dealing with its distribution and selling problems.

January, 1928 M. T. C.

Multiprint Company[1]

MANUFACTURER—OFFICE EQUIPMENT

Market Selection—*Discontinuance of Sales Work in Outlying Territories.* Because many of its sales apparently were made at too high an expense, the company, a manufacturer of office equipment for printing and addressing, analyzed its market to separate the profitable business from the unprofitable. As a result of the analysis, the company decided to discontinue 20 of its 50 branch offices and to concentrate its sales efforts in the larger cities and upon the larger users. This step enabled the company to release 90 salesmen and to improve its percentage of profit appreciably.

Distribution Channels—*Direct Selling Replaced by Distributors.* The company, a manufacturer of office equipment for printing and addressing, decided to discontinue direct selling in the smaller cities and towns, and instead to sell through stationery stores and adding machine companies in those localities. Sale through these distributors proved unsatisfactory, however.

Sales Force Control—*Centralized Supervision of Salesmen's Activities.* Because its sales expense was judged to be too high, the company, a manufacturer of office equipment for printing and addressing, decided among other measures to improve its sales force control. For this purpose it obtained an exhaustive list of prospective customers; directed the sales calls of its salesmen and required the salesmen to maintain records and to report calls.

(1924-1926)

The Multiprint Company manufactured a line of office equipment similar to the so-called "Multigraph" and "Addressograph" machines. The chief items in the line were printing, typewriting, and folding "Multiprints," to which was added in 1926 an addressing machine. The company's sales volume of machines, attachments, and supplies in 1924 amounted to $4,000,000, which was slightly less than sales in the previous year. About 25% of the sales were made in foreign countries. By 1925 profits of the Multiprint Company had decreased to a highly unsatisfactory point. Since the costs of production could not be appreciably decreased, the company sought to increase earnings by improving its marketing methods.

The printing machines were the most important in the Multiprint line. They were small and compact and could be used to

[1] Fictitious name.

produce, with printer's ink, letters, folders, post cards, sales bills, bulletins, tags, labels, office and factory forms—in fact, any kind of printed matter, except fine-screen halftones, which did not require a printing area exceeding 8 5/16 inches by 13½ inches. The large machines were operated by electric motors and were guaranteed to print at the rate of 4,500 copies an hour.

The buying motives to which the company appealed were economy in use and increase in sales. It was stated that purchasers' sales could be increased by the use of attractive direct-mail material and that economy could be effected by reducing printers' bills. Testimonials were used extensively in making these appeals. In a survey made by the company in which 2,000 users in 20 localities were circularized, it was found that the average company had a printing expense 43% less than it would have had if all its printing were done by job printers.

When the chief appeal to be used in a particular instance was economy, the salesman endeavored to see the office manager, the treasurer, or the comptroller in the prospective customer's organization. When increase in sales was the predominant appeal, the advertising manager or the sales manager was approached. One of the salesman's most difficult tasks was to find and to see the right man. The task of gaining admission to potential customers was somewhat lightened by the company's direct-mail advertising; but the sales manager believed that making contacts was an individual problem, varying with the salesman and the prospective purchaser. Sometimes, when a salesman was able to obtain the name of the man who determined the purchase of office equipment, an interview was facilitated by a personal letter written by the salesman, or, at his request, by the division manager or by the home office. The period of negotiation preceding a sale frequently involved four to six months and eight to twelve calls.

Sales of machines and attachments constituted 50% of the total business. The other 50% was made up of sales of supplies, such as inks, ribbons, type, stands, stools, and electrotypes. All supplies were purchased by the Multiprint Company for resale. Prices for machines ranged from $215 for a small hand-operated printing machine to $2,000 for a large, electrically operating Multiprint with motor and attachments. Orders for supplies generally were for less than $100, although sometimes they were for as much as $9,000. Prices were f.o.b. division sales office;

cartage was free to customers in the localities of the division offices. Of total deliveries, 99% were made from the division offices.

All Multiprint sales in the United States and Canada were made directly to the users. In other countries, Multiprints were distributed through agents. For its direct sales the company had, in 1924, 52 division offices, 4 of which were in Canada; there were, in addition, 50 division branch offices. The company employed 290 regular salesmen, all of whom had definite sales areas and lived in their division territories. At each of the larger division offices there were a manager who did no selling; regular salesmen; junior salesmen, who handled service and supplies; sales promotion workers; and an office force. At each of the less important division offices there were a manager who did selling, a regular salesman, sometimes a junior salesman, and a bookkeeper. A division branch office usually was operated by one regular salesman. The customary stock carried at a division office averaged from $20,000 to $25,000.

On all machine sales in his division a division manager was allowed a commission of 40% of the standard sale price and on sales of supplies he was allowed a smaller and varying commission. Out of these commissions he had to pay the expenses of his office, including commissions to the regular salesmen. The commission to most regular salesmen was 20%; a few regular salesmen who traveled in outlying territories and whose traveling expenses therefore were unusually high received a 25% commission. Regular salesmen paid their own expenses from their commissions. They also paid the salaries and commissions of the junior salesmen; those salesmen were employed by the regular salesmen at their option and worked under their direction.

The company endeavored to have a representative call upon each user of its machines once every 30 or 60 days for the purposes of selling supplies, of keeping the machines in repair, and of increasing the use of the machines. Many owners, especially the smaller companies, were inclined to use the Multiprints infrequently because they were not labor-saving devices for necessary work in the sense that calculating machines were, for instance; the use of Multiprints meant additional labor. The company wished to stimulate use of its machines not only because this would increase sales of supplies, but also because it would reduce

the number of second-hand machines which might appear on the market. This task of calling on users was usually performed by the regular salesmen, although the company encouraged those salesmen to employ junior salesmen for this work. There were about 50 junior salesmen in 1924.

The company had exercised little control over its sales force. The division managers usually had the point of view that they were in business for themselves. The salesmen were supposed to report prospects and were expected to add three new prospects a day; but their cooperation was slight. They received no assistance from the company in locating prospects, except that the company referred to them any inquiries which it received.

In 1924, although the volume of business was deemed satisfactory, the company barely made a profit. Furthermore, many salesmen, especially those on a 25% commission, were complaining that their earnings were too low. A number of them claimed that the market was saturated and that the company needed new lines. Many of the division offices and a majority of the division branches showed a loss. After analyzing the situation, the management came to the conclusion that many sales were made at too high an expense.

The company had adopted the slogan, "A Multiprint in every town." The sales manager believed that the slogan should be revised to read—"In every town a Multiprint which can be sold at a profit." He stated that concentration on the larger cities would not only reduce selling expenses, but also would increase the sale of the larger machines upon which the company made proportionately a greater manufacturing profit. He did not believe that the market was saturated. In his opinion, the difficulty was that the salesmen were in a rut and were failing to search out many good prospects.

The sales manager recommended, therefore, a thorough analysis of the market with the view of determining the location of all possible customers. The unprofitable division offices could not be immediately discontinued, since the company had made contracts for a period of years with their managers. It was believed, however, that with a careful analysis and with an effective method of control of sales force, most of the division offices could be made to yield satisfactory profits.

With regard to the branch offices, which were located usually

in cities of less than 100,000 population, and with regard to sales efforts in all other small cities not close to the division offices, the company had the choice of several plans. First, it could discontinue direct selling in all the smaller cities and towns, whether branch office cities or not, except those few which had been profitable. Second, it could continue selling directly in only about one-half or two-thirds of the branch office cities which, in the opinion of the sales manager, could be put on a profitable basis if the sales efforts were properly directed. Third, with the adoption of either of these courses, the company might sell through stationery stores and adding machine companies to supplement its direct sales.

The company decided, in 1925, to continue 30 of its branches and to sell through stationery stores and adding machine companies in the smaller communities. But after a year of experience, indirect selling was abandoned for several reasons. The retailers had begun to ask that the machines be sent on consignment, whereas the company wished them to buy the machines outright. Sales were smaller than anticipated, it was thought, largely because Multiprints required more sales effort than retailers were willing to exert and greater skill in selling than most of them possessed. Furthermore, the Multiprint Company had to render considerable repair service in the territories of the retailers. The company also found itself in possession of a number of second-hand machines from retailers who had misused or abused the machines in demonstration.

The method adopted to put on a profitable basis the 30 branch offices which were continued was the same as that used in revamping the sales policies of the division offices. The new policy consisted of an analysis of the market and of direction and control of sales efforts.

The first step in the analysis was to obtain from financial and trade catalogs and registers the names of all possible purchasers of Multiprints. The names were classified according to location and according to 10 major vocational groups. These groups were manufacturing companies, banks, brokers and commercial paper houses, insurance companies, churches, associations and organizations of all sorts which maintained offices, department stores and other large retail stores, smaller retail stores, wholesalers, and laundries and dry cleaners. By far the largest group was manu-

facturing companies. When possible, the financial ratings of the organizations in these groups also were obtained. Organizations with less than a $50,000 rating were eliminated as probably being too small to justify the company in calling on them. The analysis revealed many more possible users than was expected either by the officers of the company or by the salesmen. For instance, it showed to one salesman who had complained that his territory was saturated that he had visited only 20% of the possible users. During the first month after he received the prospect list for his territory from the company, this salesman made the largest sales in his experience.

Of the potential customers the company decided, except in special instances, to approach only those companies located within a 50-mile radius of a division or branch office. This policy of concentration in small areas, combined with the elimination of 20 branch offices, enabled the company to reduce the number of its regular salesmen from 290 to 200. At the same time, most of the sales obtained at the greatest cost were eliminated, and the average size of order tended to be increased.

The activities of the salesmen were further directed by having them concentrate on one of the ten vocational groups at a time. The company started its campaign with two mailings a month for six months to all names in the group selected for attention. Letters were addressed to officers of companies when names were obtainable. At the end of the six-month period, a follow-up by the salesmen was required. The salesmen were further required to keep two files of customers. One was an active prospect file for companies which should be called on within a month; the other was for possible customers, from which were obtained the names for the active prospect file. A "possibility" became a "prospect" after a favorable call was made or after receipt of inquiry from the possible customer. The names of possibilities were obtained by the home office and mailed to the salesmen. Each salesman was expected at all times to have about 50 names in the active file.

The salesmen also were required to report each month to the office of the sales manager the calls they had made, to state whether the firms called upon were users or nonusers, and to indicate whether those firms had been visited previously. This information guided the company in its direct-mail advertising.

To reduce the expense of inventories at the divisions and to decrease freight charges, in 1926 the company began quoting prices f.o.b. factory instead of f.o.b. division offices. The orders of the division offices had not been large enough to effect savings through carload shipments. Promptness in delivery of machines to customers, furthermore, was not necessary in most cases; the purpose of stocks was chiefly for demonstrations. Since most customers agreed to accept shipments direct from the factory, within a year the average inventory at the division offices was decreased one-third, and it was expected that the inventory eventually could be reduced to one-half. The company anticipated a saving of $70,000 annually by quoting prices f.o.b. factory.

In 1926 the company experimented successfully in four large sales divisions with sales campaigns directed to "millionaire firms," that is, firms with a financial rating of $1,000,000 or over. Sales to these firms were made at a lower relative expense and the machines purchased by this group were manufactured at a lower relative cost. The average machine purchased by this group sold for $1,500, which was near the maximum unit sale.

These new sales policies enabled the company to increase slightly its volume of sales, to decrease manufacturing costs because of the greater sale of large machines, to decrease selling expenses, to increase the earnings of salesmen, and to double its own profits within one year after the change was made.

COMMENTARY: The outstanding feature in the experience of the Multiprint Company recorded in this case was its diagnosis of its problem. The precipitant of the problem was the low profit earned by the company at a time when the salesmen were complaining of inadequate compensation. From its preliminary consideration of the situation, the company concluded that marketing expenses were too high, rather than that sales volume was too low. The company thus approached its problem with greater sanity than has been manifested by numerous companies under similar circumstances.

The company then proceeded to ascertain where its selling expenses were in the highest ratio to sales. This analysis indicated that it was devoting too much attention to the small, scattered market areas and to small users in the denser market areas.[2] The preparation of the list

[2] The similarity between the results of this analysis and those obtained by the Erven Leather Products Company (page 3) is to be noted. Although the problems of marketing belting and those of marketing multiprint machines differ in many respects, the two companies had this problem in common.

of potential users of such equipment revealed many unrealized sales opportunities in the denser areas. The company decided, therefore, to withdraw from the least profitable market areas.

The experiment with distribution through dealers in the market from which salesmen were withdrawn yielded unsatisfactory results. The reasons therefor were the lack of specialized knowledge by the dealers, the inability of dealers to render satisfactory repair service, and the accumulation of second-hand machines used by dealers for demonstration purposes. This result indicates a lack of the right type of dealers in this particular industry rather than the general impossibility of using the services of dealers for such purposes. In several other industries there are dealers who act as satisfactory distributors under such circumstances.[3]

The neglected sales opportunities in the larger markets disclosed by the company's list of prospective customers with ratings above $50,000 show the danger of permitting salesmen complete independence in locating their prospects.[4]

By eliminating firms with credit ratings below $50,000 from the list of prospective customers and by concentrating sales efforts in territories within a 50-mile radius of a division or branch office, the company was able to reduce the number of salesmen from 290 to 200, increase its volume of sales, increase the sales of larger and more profitable machines, decrease manufacturing costs, decrease the ratio of selling expense to sales, increase the earnings of salesmen, and double its profits. Such an achievement could be accomplished only by a company which based its decisions on a careful diagnosis of its problem and a full knowledge of the pertinent facts. The company benefited materially by ascertaining the facts instead of experimenting blindly.

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[3] See National Rock Drill Company (A), page 113.

[4] See also Boden Paper Company, page 283; Antrim Paper Company, page 288; Munro-Cliff Company, page 245; Exton Gear Company, page 56.

Queensbury Pump Company[1] (A)

MANUFACTURER—VACUUM PUMPS

Market Selection—*Introductory Sales Program for New Product.* The company developed and patented a type of vacuum pump superior to similar pumps then on the market. Instead of undertaking to cultivate all potential markets for this product simultaneously, the company decided to focus its initial sales efforts on the large firms in those industries which constituted the most fruitful and most easily entered markets.

Pricing—*Determination of Price for New Product.* The company developed and patented a type of vacuum pump superior to similar pumps then on the market. Although it did not wish to sell the new product on a price basis, the company, since this would allow it a satisfactory gross margin, decided to set the prices of the pumps slightly below the level of competitors' prices, rather than at or above that level. No mention of price was made, however, in the circular letters in which the company announced the product to prospective users.

(1927)

Early in 1927 the Queensbury Pump Company completed the development of a vacuum pump which could be made in any capacity to give a high degree of vacuum theretofore obtainable only by small pumps designed for laboratory use. The new Queensbury pumps would be made in sizes ranging from a displacement capacity of 50 cubic feet of air per minute to several thousand cubic feet per minute. In connection with the marketing of this new product, it was necessary for the Queensbury Pump Company to decide whether it should undertake to develop all potential markets for the product simultaneously or whether it should focus initial sales effort on selected markets. A decision also had to be reached as to sales prices.

Annual sales of the Queensbury Pump Company were in excess of a million dollars. The company manufactured road oiling and tarring equipment, street sweepers, power pumps, and clutches. The road oiling and tarring equipment and the street sweepers were sold to municipalities and road contractors. Among the principal users of Queensbury power pumps were the petroleum industries, the shipbuilding industry, manufacturers of fuel oil equipment, manufacturers of roofing and floor coverings, paint

[1] Fictitious name. See also Queensbury Pump Company (B), page 122.

and varnish manufacturers, the dye and chemical industries, sugar refineries, steel manufacturers, meat packers, soap manufacturers, manufacturers of confectionery, and textile mills. The company sold its clutches outright to selected mill supply firms. All the other products it sold directly to users.

The Queensbury Pump Company operated seven sales branches. Two were on the Pacific coast; two were in the Middle West; one was in the South; and two were in the East. At each branch there was a manager who was active in selling and at several of the branches there were one or two salesmen in addition. Six salesmen traveled from the main office, which was located in the East. The branch managers were competent men and were allowed a large measure of freedom in directing sales activities in their own territories. Each branch manager and salesman sold all the company's products except the clutches, which were handled by the mill supply firms.

With the exception of the clutches, all the company's products in general were sold at prices above those for competing products. The company was known as a manufacturer of high-grade equipment and its salesmen were trained to emphasize the performance of the products and their low operating and repair costs. Prices of Queensbury clutches were comparable to prices of competing equipment.

Vacuum pumps were used in a variety of industries. Manufacturers of electric light bulbs required vacuum pumps for exhausting the air from the bulbs before sealing them. An executive of the Queensbury Pump Company stated that, inasmuch as pumps giving the high degree of exhaustion required by the manufacturers of electric light bulbs never had been made in large capacities, those manufacturers were obliged to use small laboratory pumps. The exhaustion given by these pumps, he stated, was not perfect, and the process was completed by the burning of a chemical in the bulbs after they were sealed. The executives of the Queensbury Pump Company were confident that the new Queensbury pumps, since they could be made in large capacities while at the same time giving a high degree of vacuum, would facilitate the manufacture of electric light bulbs. It also was possible that the degree of exhaustion given by the new pumps would make unnecessary the burning of the chemical in the sealed bulbs.

Other users of vacuum pumps were manufacturers of radio

condensers, makers of X-ray tubes, manufacturers of pharmaceuticals, manufacturers of electric cables and other items requiring impregnation, manufacturers of impregnating apparatus, makers of thermometers, manufacturers of chemicals, manufacturers of vacuum bottles and jars, manufacturers of vacuum pans, evaporators, stills, and other vacuum equipment, manufacturers of cheese, manufacturers of condensed, evaporated, and powdered milk, other manufacturers of foods cooked by vacuum process, and canneries. There also were other markets which, in the opinion of the Queensbury Pump Company, might be developed. In some of the potential markets for the new Queensbury pump the desirability of a pump which would give a high degree of vacuum was clearly recognized; in other of the markets an exceptionally high degree of vacuum was not deemed so important.

Vacuum pumps often were used in connection with other vacuum equipment such as stills, evaporators, and pans. Sometimes they were sold as a part of that equipment and sometimes they were sold directly to users. An executive of the Queensbury Pump Company stated that there were four or five prominent manufacturers of vacuum equipment in the United States.

In 1927, when the Queensbury Pump Company was ready to market its high vacuum pump, there were in the United States, an executive of the company stated, five large manufacturers of vacuum pumps. According to executives of the Queensbury Pump Company, the pumps of these manufacturers did not give nearly so high a degree of vacuum as was given by the Queensbury pumps nor were they made in such large capacities. The Queensbury pumps, moreover, were exceptionally simple in construction. Tests had satisfied the company that the pumps not only were unusually efficient in performance but also uncommonly economical in operation. Repairs, it was anticipated, would be needed infrequently. The pumps were completely protected by patents.

Competing vacuum pumps of 50 cubic feet capacity were being sold for from $275 each to $300 each and prices for larger sizes were correspondingly higher. The Queensbury Pump Company could sell its vacuum pumps in the 50 cubic feet size for $250 each and still have a liberal gross margin. The low cost resulted from the simplicity of the construction of the new product. If the company set the prices for its pumps below the level of competing prices, it not only would have the sales advantages of efficiency and qual-

ity but also the advantage of price. On the other hand, Queensbury products always had been sold on a basis of quality; the company stressed low ultimate cost as opposed to low initial cost. It was possible, moreover, that if the company set its prices below competitors' prices the competitors would reduce their prices.

Financially the Queensbury Pump Company was in a position to undertake the immediate development of all its potential markets. To do this thoroughly would require substantial additions to the sales force, inasmuch as personal solicitation probably would be necessary for making sales. In order to convince users, furthermore, that the new pumps would give the results ascribed to them, the company might find it necessary to make trial installations. If the company's salesmen were conducting negotiations with a large number of potential customers simultaneously, a heavy investment in machinery installed on trial might result. Considerable sales resistance, moreover, probably would be encountered, especially among small users of other makes of pumps, who, even though convinced of the merits of the Queensbury pumps, would hesitate to scrap existing equipment and purchase new equipment. This resistance probably would necessitate a long period of missionary work. The executives recalled that when the company first had placed a salesman in the Middle West for its power pumps he had not earned his salary and expenses for three years.

Instead of undertaking to develop all its potential markets at once, the company could select certain territories for thorough development or it could select certain industries upon which to focus its sales efforts. The manufacture of electric light bulbs, for instance, was concentrated in the hands of a very few companies, each of which could use several hundred vacuum pumps. If the company could persuade these well-known firms to use its pumps, moreover, that fact would serve as a sales argument in securing orders from smaller users. Another concentrated market for vacuum pumps was among manufacturers of vacuum equipment, who often sold vacuum pumps with the pans, dryers, stills, and other items that they manufactured. Manufacturers of radio condensers were another group of users who, like the manufacturers of electric light bulbs, recognized the importance of a high vacuum.

The Queensbury Pump Company decided to set the prices of its

vacuum pumps slightly below the level of competitors' prices. Pumps of 50 cubic feet capacity, for instance, would be sold for $250 each, whereas the price of other vacuum pumps of that capacity generally was $275. Queensbury pumps of a larger size which the company anticipated would be popular were to be sold for approximately $750 each. Competing pumps of that size cost about $900 each.

The company further decided not to undertake to develop all its potential markets simultaneously. It was of the opinion that its existing sales force with a few additional salesmen would be able to take care of the demand for the new product if the markets were developed gradually. The company proposed to circularize a selected list of two or three thousand firms in those industries which apparently constituted the largest and most easily entered markets for the new product. Among the industries circularized were manufacturers of electric light bulbs, manufacturers of radio condensers, manufacturers of vacuum equipment, makers of X-ray tubes, and manufacturers of electric cables. The company's circulars were sent to large and medium-size companies in the selected industries; companies with ratings of less than $50,000 were not circularized.

In most instances the circular letters were sent to engineers or others interested in the technical aspects of the product. No mention of price was made in this advertising. The high degree of vacuum given by the new pumps, the fact that they could be purchased in any capacity, and the high quality of Queensbury products were stressed. In each circular letter a stamped and addressed return card was enclosed to be used if further information was desired. The card also contained spaces for the names of other persons in the firm who would be interested in receiving additional information. Between 20% and 25% of the persons circularized replied, and many sent in additional names.

The inquiries received were referred to the proper branch managers for follow-up. The company's branch managers and salesmen concentrated their sales efforts upon approximately 20 very large users, including the leading manufacturers of electric light bulbs and of vacuum equipment. With the exception of the New York territory, branch managers and salesmen did not, as a rule, visit small and medium-size users of vacuum pumps except in response to inquiries. In the New York territory, one man under-

took to visit all potential users. During the first six months he secured but one order. After that time he secured many orders.

During its introductory sales efforts the company found it necessary to make trial installations on about 50% of its orders. Some potential users were extremely skeptical of the possibility of a pump of large capacity being able to draw a high vacuum. One potential customer said he did not believe it could be done and refused to permit one of the pumps to be installed for trial in his plant. Most of the large potential customers visited, however, were interested in the new product, and several placed large orders. No price concessions were made to secure the orders of these large users. Several manufacturers of vacuum equipment agreed to standardize upon Queensbury pumps. Those manufacturers were allowed a discount of 15% from the company's prices to users.

The company anticipated that the orders which it would secure from the large users upon which it was concentrating its sales efforts would enable it to put production of the new product upon a quantity basis. Later the company expected to begin to develop other markets and to solicit orders from smaller users.

COMMENTARY: The Queensbury Pump Company prepared an especially well-coordinated and strategically planned program for marketing its new vacuum pumps. By sending sales circulars to plant engineers and other technical operating executives in 2,000 to 3,000 companies, it was addressing its initial sales message to the individuals who would, in most instances, initiate the purchases of such equipment. Through these circulars some of the most likely prospective customers could be located while, at the same time, practically the entire market, except for small users, was blanketed by the announcement. This blanketing of the market was advantageous in that it would help to guard against loss of sales through ignorance on the part of potential but unreached customers while the market was in the process of cultivation by the company's salesmen.

Although the plan for the gradual development of the market which the company adopted probably did not yield so many immediate sales as might have been obtained by a broader scale of sales efforts, it was the logical plan to follow. By following this plan the company avoided the expense of hiring, training, and managing a large number of new salesmen, whose services would not have been needed after the market had been covered thoroughly. The risk of a heavy investment in machinery installed on trial also was avoided.

By concentrating its sales work on a selected group of large users and on those who had replied to the blanket circular, the company gained three advantages in addition to the economy resulting from not increasing its sales force materially and the avoidance of risk of heavy inventory. The large users were likely to be the most receptive to new offerings of equipment and also to be able to finance the purchase of it. Hence, sales resistance would be less in dealing with that group of prospective customers. In the second place, those users were able to give large individual orders, thus tending to enable the Queensbury Pump Company to keep down the ratio of its selling expense to sales during the introductory period. In the third place, as soon as some of the large users had installed the new pumps, knowledge of that fact would begin to percolate down to smaller potential customers, and thereby sales resistance would be lessened in that segment of the market by the time the company's salesmen were ready to cultivate it.

Inasmuch as the prices decided upon by the company, although lower than competitors' prices, promised to yield a satisfactory profit, they were the right prices to use. With these lower prices, however, the company might easily have stumbled into a pitfall. That pitfall was the use of lower prices as the primary sales appeal. If the company had stressed the fact that its prices were lower than those of competitors, the attention of potential customers would have been focused on comparative prices instead of upon comparative performance, and the merits of the new Queensbury pumps might easily have been neglected. The company shrewdly avoided this pitfall by omitting any mention of price in its initial sales circular. Thus, attention was directed to the merits of the Queensbury pumps without reference to price. The lower sales prices thus became a secondary and at the same time a more effective sales argument than they would have been if they had been featured.

Such products as vacuum pumps are bought for rational motives and, if the technical reasons why a particular make should be bought are made clear, then price, whether higher or lower than competitors' prices, is weighed calmly by prospective buyers as one factor in determining their decisions on whether or not to purchase. When price is stressed as the chief sales argument, however, the other factors seldom are given their proper attention. The strategy adopted by the Queensbury Pump Company enabled the company to gain the advantage of quoting prices below those of competitors, while at the same time price was placed in its proper perspective and the company sold its pumps on a performance basis.

November, 1927 M. T. C.

Glen Tool Company[1]

MANUFACTURER—ELECTRIC DRILLS

Sales Planning—*Development of New Market to Reduce Sales Fluctuations.* In order to reduce the severe cyclical fluctuations in its sales, the company, whose chief products were heavy portable electric drills and grinders for use by manufacturers, decided to develop the market among small, intermittent users such as machine and repair shops. To meet the needs of this market it was necessary for the company to manufacture a line of lighter and cheaper tools.

Distribution Channels—*Distributors Utilized in Preference to Direct Selling.* When the company, a manufacturer of portable electric drills and grinders whose sales had been confined chiefly to manufacturers, undertook to develop the market for its products among small, intermittent users such as machine and repair shops, it had to decide whether to sell directly or through wholesalers and supply firms. The company decided to sell through selected wholesalers and supply firms and to support their sales efforts with missionary work.

(1924-1927)

The Glen Tool Company manufactured portable electric drills and grinders designed for heavy production and maintenance jobs. It also produced, as an incidental line, small stationary electric drills and grinders. Total sales in 1923 were approximately $750,000. With the exception of a small volume of sales secured through manufacturers' agents, the company made all sales, of both types of tools, directly to users; 40% of its direct sales were made to Class A customers, 40% to Class B, and 20% to Class C. Class A were automotive manufacturing companies; Class B were railroads, railroad car manufacturers, shipbuilders, bridge and structural steel manufacturers, and fabricators of steel; Class C were intermittent users such as machine shops, maintenance shops, and large garages and service stations.

The sales of the Glen Tool Company had fluctuated severely, because in depression periods all except the intermittent users made pronounced curtailments in their purchases. The amplitude of yearly fluctuations was sometimes as much as 60%. In order to reduce the variations in sales, and thereby to reduce heavy overhead charges, the company decided to develop the Class C

[1] Fictitious name

market, the intermittent users. The company had the choice of increasing direct sales or of using wholesalers and mill supply firms. If the latter course were adopted, it had to determine how intensive to make the distribution.

Class B customers usually bought several drills at a time; an initial order frequently involved from 15 to 25 tools, amounting in value from $1,200 to $2,000. The average cost of a tool was $83. In selling to this market, the salesman needed a thorough knowledge of the technical uses of the tools. Four to eight calls were usually necessary to convince customers of the advisability of using electric tools. New customers generally were companies which the salesmen had induced to substitute electric tools for pneumatic tools. Much sales resistance was encountered because, although electric tools generally were admitted to be more economical to operate, the pneumatic system could be used for a variety of additional purposes, such as hammering and compressing, which were necessary operations for many companies.

Practically all automotive manufacturers, Class A, used electric drills and grinders; for this reason and because automotive companies were slow to change their sources of purchase as long as they were satisfied with the brands and prices of tools already in use, it was difficult for the company to expand its sales in this market. The sales manager of the Glen Tool Company, therefore, considered that his problem in this market was chiefly to keep satisfied the customers which the company already had.

Class A and Class B customers used drills and grinders for heavy duty in production. To meet their needs, the Glen tools were of heavy and durable construction. The normal life of Glen tools was stated to be three or four years. They were slightly higher in price than the average similar electric tool.

There were twenty-four companies, the sales manager stated, which manufactured electric portable tools. Eighteen of these firms had merely local markets, but six competed with the Glen Tool Company on a national scale. Only one competitor had larger sales than the Glen Tool Company; sales of that firm were about three times those of the Glen Tool Company.

Class C customers, that is, machine shops, plant maintenance and repair shops, and to some extent automobile repair shops, ordinarily had use for but one drill and one grinder. Usually considerable sales effort was required to convince them that they

needed electric tools at all. On the other hand, once the need was felt, or especially when a new tool was needed to replace an old drill or grinder, the intermittent user generally wanted prompt delivery. One of the best ways to sell electric tools to this market was to demonstrate them. Consequently, when approaching companies which had not previously used electric drills or grinders, the salesmen customarily carried Glen tools with them and endeavored to induce the mechanics to try them. The hearty approval of a mechanic was considered the best recommendation to the foremen or shop managers who decided upon purchases.

The Glen Tool Company in 1923 was employing 25 salesmen who covered the more important industrial sections of the United States. Six manufacturers' agents also were employed for the more distant and relatively undeveloped industrial areas; the agents sold to wholesalers and mill supply firms. A commission of 20% of the published standard prices was allowed salesmen and agents. Salesmen as well as agents paid their own expenses. Some of the salesmen found it necessary to carry one other line which was purchased by the same customers who bought electric tools.

For a number of years prior to 1923 the Glen Tool Company had urged its salesmen to push sales to Class C customers, particularly during periods when Classes A and B had reduced purchases. But the company had met with little success in this effort. Many of the salesmen claimed that the cost of selling to intermittent users did not justify special effort in that direction. Sales to those users were generally considered as fill-in business. The sales manager believed that it was natural for salesmen geared to large orders to neglect the chances for small orders. The salesmen, furthermore, constantly complained that many intermittent users whom they approached replied to this effect: "You are just too late; we needed a drill right away, so we bought from our local jobber." In regard to garages and automobile repair shops, the market which was least developed, the salesmen disliked dealing with them; they stated that usually when they called the garage foremen were at work in the shop, that often the foremen continued working during the call, and that they were hard to get along with.

The management of the Glen Tool Company thought it necessary to double or treble sales to Class C users in order to reduce

satisfactorily the fluctuations in sales and production. It was decided, therefore, to expand into this market and to manufacture lighter and cheaper tools which were better adapted to the market's needs.

To develop this market the sales manager proposed that the company sell through mill supply firms and automotive equipment wholesalers. He felt that the requirement of promptness in delivery made local stocks necessary. The small average sale of drills and grinders, furthermore, would not alone support a salesman, in his opinion, because not enough of these tools could be sold in any one town or city. He pointed out, in addition, that automobile repair shops were accustomed to buying from wholesalers. All competitors used wholesalers in reaching this market, and, moreover, all obtained as wide a distribution as possible. The sales manager stated that in one large city, for instance, there were 30 supply firms and wholesalers handling automatic tools, and that one manufacturer of electric drills and grinders sold through 25 of them.

Another officer of the Glen Tool Company thought, on the contrary, that the company should first try having special salesmen to sell directly to intermittent users. It was pointed out that, if the Glen Tool Company sold to supply firms and wholesalers, it would have to grant a 30% discount. The company would still have to maintain 6 or 8 salesmen to sell to 800 or 1,000 supply firms and wholesalers if reasonably dense distribution were to be attained. This officer stated that automotive equipment wholesalers would not give much attention to the products of a company unless considerable missionary work was done. The missionary sales force expense, he estimated, probably would amount to about 15% of sales. The difficulty and expense of obtaining good distributors also was emphasized, since all of them were selling electric tools of one or more manufacturers. He did not believe that many desirable distributors would be willing to drop lines of tools already carried or would add Glen tools to them. A reasonably full assortment of Glen tools would require about $2,000 investment on the part of each distributor. The company's loss from bad debts in the intermittent market, as well as in the Class A and Class B markets, had been very small.

The company decided in 1924 to sell to intermittent users through mill supply firms and automotive wholesalers. The sales

manager stated that the fundamental determining factors in this selection of the channel of distribution were: first, the relatively small number of potential customers in a territory; second, the fact that automotive wholesalers already had established contacts with the repair shops, a market deemed difficult to deal with; and third, the need of promptness in delivery.

The company's total sales volume in 1926 was double that in 1923. Automobile repair shops bought 45%; machine and plant maintenance shops, 15%; and Classes A and B customers, 40%. The price of the average tool was $42 as compared to $83 in 1923, when the company manufactured tools primarily for heavy production purposes. It was expected that variations in yearly sales would be reduced one-half to two-thirds.

The company, by 1927, was selling through 350 mill supply firms and automotive wholesalers. The distribution was considered "selected." For instance, out of 30 possible distributors in one large city, the company sold through only 6. The policy was to sell through the minimum number of distributors consistent with a fair coverage of the market.

Seventeen of the 30 salesmen then employed by the company sold to the 350 distributors for the intermittent market; the salesmen received a fixed sum per month to cover living and traveling expenses, plus a 5% commission on sales above a certain figure. About three-fourths of their time was spent in missionary work, either alone or with distributors' salesmen. Nearly all the missionary work was done for the automotive wholesalers, who, in the opinion of one of the officers of the company, had been spoiled by an unwarranted amount of missionary work.

The company's general approach in obtaining distributors was to point out the weakness of dense distribution, the method used by competitors. It was argued that a wholesaler selling a widely distributed line could demonstrate no superiority in his product over competitors, and that competition on a price basis would likely result. With this argument combined with that of the high inventory cost of carrying competing lines, the Glen Tool Company was able to obtain desirable distributors, many of which dropped competing electric tools. The average investment in Glen tools amounted to about $2,500, with a typical stock-turn of four times a year.

In 1926, the company found it advisable for its seven salesmen

who were doing missionary work in connection with sales to distributors to carry a valve grinding tool, which was manufactured by another company. An additional line was found necessary in order not to have to increase the salesmen's commissions on Glen tools.

The company's sales force expense for the intermittent market in 1926 amounted to 14% of sales. The total advertising expense for this market was about 5%. The sales manager expected the selling expenses to be less in 1927, the first year which would not involve any appreciable expense for obtaining distributors.

COMMENTARY: Two significant decisions by the Glen Tool Company are recorded in this case. The first of these decisions was to develop the company's market among small or intermittent users of electric tools. The second decision was to employ selected distributors for marketing the company's products to small users. Incidentally, the decisions of the company to employ manufacturers' agents in sparse markets and to have part of its salesmen carry an outside line also are to be noted.

The circumstance which brought about the company's initial decision to develop the market among small users was the wide cyclical fluctuations in the sales to manufacturers.[2] A potential market clearly existed among automobile repair shops and other establishments of that type, which *prima facie* seemed to promise greater stability than was manifested in the other markets in which the company's products were sold. The relative degree of stability could be ascertained, however, only by experiment, for there had been no adequate record compiled from the experience of other companies to furnish a dependable guide.

The chief obstacles to the development of the market among small users were, briefly, as follows. The volume of purchases by individual users would be small. The company's salesmen were accustomed to deal with large buyers and therefore looked upon the small users as incidental customers. Prompt delivery was essential. Demonstration was needed as a means of proving the potential advantages of using such tools and of meeting the buying inertia which prevailed in the repair shop market.

The attitude of the company's salesmen, the small size of the individual sales, and the necessity for rendering prompt delivery made direct sale to the small or intermittent users impractical. Hence, the company's first decision, to enter the repair shop market aggressively, led logically to the second decision, to employ the services of distributors for developing that market. The amount which it was necessary

[2] See also Nerlan Company, page 219.

for a distributor to invest in a stock of the tools and the sales promotion effort needed made it advisable to select the distributors carefully; promiscuous distribution or an attempt to induce all supply firms to carry Glen tools would have resulted in a wasteful duplication of stocks and a deadening of the interest of the distributors in sales promotion. Selected distribution was essential.

Missionary sales work by the Glen Tool Company's salesmen served to give an impetus to the distributors and their salesmen. The plan would not be wholly successful, however, unless it were found possible eventually to discontinue most of the missionary work.

This case affords a significant example of a combination of distribution methods, whereby the company sold directly to large users and employed selected distributors for reaching the market among small or intermittent users. Although the company had made substantial progress in smoothing out its sales curve, its plan had not been subjected to the test of a major business depression such as that of 1921-1922. The results justified the adoption of the plan, but it would be hazardous to count heavily upon it for maintaining a steady volume of sales in the event of a severe business depression.

January, 1928 M. T. C.

Neville & Company[1]

CONVERTER—COTTON CLOTH

Purchasing—*Purchase through Brokers Replaced by Direct Purchase.* The company, a large cotton cloth converter purchasing both staple and fancy fabrics, until 1919 had bought grey cloth almost exclusively through brokers. Large orders placed through brokers quickly became known to the trade in general, enabling competitors to take advantage of market forecasts by the large converters and producing artificial and ill-founded activity in the market. For this reason, and because it hoped to obtain grey cloth more cheaply by direct purchasing than through brokers, the company decided gradually to increase the proportion of purchases made directly from cloth manufacturers or their selling agents.

Purchasing—*Maintenance of Relations with Brokers.* The company, a large cotton cloth converter purchasing grey cloth in both staple and fancy fabrics, had been gradually increasing the proportion of its purchases made without the services of brokers. Because, however, the company in few cases could effect a saving by purchasing directly rather than through brokers and because the brokers were more familiar with the market than the company's cloth buyer could be, the company decided not to discontinue the services of brokers entirely, but to place sufficient orders with them to insure their interest in the company, in order that they might keep the company informed as to style trends, new developments in the market, and advantageous opportunities to purchase.

(1919-1922)

Until 1919, Neville & Company, a cotton cloth converter, had purchased cloth almost exclusively through brokers, buying directly from mills or their selling agents only under exceptional circumstances. At that time, however, the executives of Neville & Company had decided gradually to increase the proportion of purchases made without the intervention of brokers. By 1922 the company was buying approximately 90% of its total requirements of cloth directly from cloth manufacturers or their selling agents. Although it was apparent to the executives that decided benefits had been realized from the company's plan of dispensing very largely with the services of cloth brokers, nevertheless, in 1922, the executives reopened the question of the extent to which the company should use brokers in purchasing cloth.

[1] Fictitious name.

As a converter, Neville & Company bought cotton grey cloth, had that cloth bleached, dyed, printed, mercerized, or finished in some other way for its account by finishing companies, and then sold the cloth to cutters-up, industrial firms requiring cotton cloth in the manufacture of their products, and wholesalers. The converter rather than the cloth manufacturer, therefore, bore the risk of style and finish.

Neville & Company, one of the largest converters in the United States, bought several million yards of grey cloth annually. Of this quantity, from 80% to 90% was staple fabrics such as print cloths, sheetings, drills, twills, and ducks. From 10% to 20% was of fancy weaves, including dress goods, fancy shirtings, and cloth for use in making underwear.

In deciding in 1919 to increase the proportion of purchases which it made directly, the company had been influenced by the fact that it ordinarily was impossible to place large orders through brokers without the knowledge of such orders quickly becoming known to the trade in general. Frequently, it was stated, when a broker had secured a large order for some particular fabric from a leading converter such as Neville & Company, the broker used that order as a sales argument to obtain additional orders for the cloth from other, smaller converters. Not only did this enable competitors to take advantage of market forecasts made by the large converter, but it tended to produce an artificial and ill-founded activity in the market, since the smaller converters were inclined to follow the lead of their large competitors in purchasing. This activity occurred at the peak of the seasonal market. The converters' sales were concentrated in the spring and autumn of each year, when new lines were introduced; consequently, the converters ordinarily placed large seasonal orders for cloth to cover their sales peaks instead of buying in smaller quantities regularly throughout the year.

In discontinuing the use of brokers, Neville & Company also had hoped to obtain its grey cloth more cheaply, inasmuch as no brokers' commissions would be involved in the direct purchases. Cloth brokers' commissions varied from ½ of 1% to 2%, depending upon the type of fabric sold and being higher for fancy fabrics than for staples. The commissions were paid to the brokers by the sellers, but were allowed for in the prices which the sellers quoted. The brokers did not stand in an agency re-

lationship either to the mills or to the converters, but acted independently of both, taking orders wherever they could be secured.

In 1922, after reviewing the situation, the executives of Neville & Company decided that it would be inadvisable to discontinue the services of brokers entirely. The company's cloth buyer estimated that in not more than one case out of a hundred did he effect an actual saving by buying directly rather than through brokers. The brokers, he stated, were more familiar with the market than he could be. Certain brokers specialized on particular fabrics, such as print cloths or sheetings; one broker concentrated upon the sale of newly introduced fabrics. Competition between the brokers was keen, moreover, and each sought to underquote the others. It was the cloth buyer's opinion that without the information which brokers were able to supply as to conditions in the market, both grey cloth buyers and sellers were likely to make occasional serious errors in buying and selling. For instance, at various times he had obtained cloth from one large seller which did not use brokers at a price slightly below the general market price because the seller was unaware that competitors had raised their price for that cloth. The executives of Neville & Company concluded that in general the company should place sufficient orders with brokers to insure their interest in the company, so that they would keep the company informed as to style trends, new developments in the market, and particularly advantageous opportunities to purchase.

In the early part of 1927, Neville & Company was making from 50% to 75% of its purchases of staple grey cloth directly from the mills or their selling agents, ordinarily from the latter. The company received solicitations for orders from numerous mill selling agents, but not directly from mills which did not employ selling agents. The brokers, therefore, provided a means of transacting business with the substantial number of mills which had no selling agents. The company also frequently placed orders with mill selling agents through brokers. Sometimes, for certain fabrics, only two or three sources were available, but many fabrics could be obtained from forty or fifty mills. Neville & Company made purchases from a large proportion of the available sources.

During the last six months of 1926 Neville & Company bought 69% of its fancy fabrics through brokers, as compared with 44% of staples purchased through brokers. In purchasing staples, the

buyer ordinarily knew the mills from which he could obtain cloth of the desired type and quality, and, in placing his order, was influenced chiefly by the prices offered. In purchasing fancy fabrics, on the other hand, which constituted about one-twelfth of the company's purchases of grey cloth, the buyer needed information not only as to prices, but also as to style trends, new weaves or types of cloth developed, and available sources. Because fancy fabrics constituted so small a portion of the company's business, the buyer preferred to rely very largely upon the brokers for this information rather than to undertake to keep himself informed independently of them.

The buyer for Neville & Company in February, 1927, cited the change which had taken place in the buying habits of cutters-up and other customers of the company as a factor which removed one of the reasons for the company's unwillingness to buy through brokers. In the three or four years prior to 1927, the company's customers had begun to buy in small quantities to meet current merchandising requirements rather than in large quantities in the spring and autumn. This change had made it possible for Neville & Company to distribute its purchases of grey cloth evenly throughout the year. Consequently, unless the company was buying heavily in anticipation of an increase in prices, no one order was large enough to occasion artificial activity in the market even though the company's competitors were aware that the order had been placed.

COMMENTARY: The cotton manufacturing industry is one of the few industries in which the merchandising function is performed extensively by specialists who are not actually engaged in production. The merchant-converter, like Neville & Company, is a specialist in merchandising. He assumes the responsibility for determining the style and finish of the fabrics which he handles. The manufacturer produces the grey cloth. The converter determines how it is to be finished. The actual finishing is performed by a job finisher, who bleaches, mercerizes, dyes, or prints it according to the converter's orders. The grey cloth is sold by selling agents or brokers or both. And after it is finished, the converter sells it to wholesalers for distribution to retailers, or the converter sells it to garment makers. Not all grey cloth is handled in this way, of course, but a large bulk of goods passes through these stages.

The advantages that are assumed to accrue from specialization are too well known to require restatement. From the marketing stand-

point, however, there are disadvantages in this diffusion of responsibility which are only beginning to be recognized. When the grey cloth is made by one party, sold by another, and finished by a third for the account of a fourth, there is a spreading out of interest and responsibility which tends to prevent the development of a broad-gauge plan of sales promotion.

The experience of Neville & Company in buying through brokers reflects the lack of established relationships in this industry and shows how powerless a grey goods mill is under these circumstances to use effective means of sales promotion. Those grey goods mills making fancy fabrics, merchandise of a type which usually benefits from especial care in marketing, seem to have been in a particularly disadvantageous position, as a result of the casual nature of their relations with potential customers.

This case does not point to a solution of the problem stated. The experience of Neville & Company in purchasing serves merely to furnish a picture of existing conditions.

January, 1928 M. T. C.

Exton Gear Company[1]

MANUFACTURER—GEARS

Distribution Channels—*Direct Selling Utilized in Preference to Distributors.* The company, a manufacturer of gears, wished to take steps to increase its sales. One means suggested was distribution through supply firms or hardware wholesalers; the company had been selling directly to users exclusively. The market for the company's gears was varied. The gears ranged in price from a few cents to several hundred dollars; some were standard and some were made to order; some were sold for fabricating purposes and some were sold for factory equipment. The distributors to whom the company had offered its line and the company were unable to agree on the discount that should be allowed.

Sales Planning—*Importance of Sales and Market Analyses—(Commentary).* The company, a manufacturer of gears, sought a means of increasing its sales volume. The commentator states that the first need of this company, like that of many other manufacturers of industrial goods, was a thorough analysis of its sales records, its markets, and its operating methods. The commentator also outlines the points that the analysis should have covered

(1927)

The Exton Gear Company, located in northern New York, had sales in 1926 of $400,000, of which approximately 75% were in New England and New York and about 25% in other parts of the United States. The company had planned to reach a sales volume in 1927 of $500,000. During the first five months of that year, however, sales were somewhat less than in the corresponding period of 1926. Existing factory capacity would permit a sales increase of 50%, and new equipment readily could be secured to allow even greater production. In view of this situation, the executives were looking for some means of stimulating sales. One means suggested was distribution through supply firms or hardware wholesalers.

The Exton Gear Company was one of the first to be established in its field. It manufactured a wide line of gears, ranging from small gears selling for 4 cents each to large gears selling for $425 each, and complete drives selling for $3,000. A large part of the company's work was done to order, upon customers' specifications, and the company was prepared to make gears to meet any

[1] Fictitious name.

requirements; the time required to complete orders received varied from a few hours to a month. The company also sold standard gears which could be carried in stock. Finished stock on hand in June, 1927, was valued at approximately $50,000.

Among the company's customers were manufacturers of textile machinery, glass manufacturers, manufacturers of grinding machines, manufacturers of timing devices and regulators, manufacturers of mechanical toys, and calculating machine manufacturers. All manufacturers using gears either as fabricating parts or as industrial equipment were potential customers for Exton gears. The Exton Gear Company estimated that its business was divided fairly evenly between these two types of markets. In the East, however, the company had found that large manufacturers requiring gears as fabricating parts in general made their own gears, whereas in the West it was more common for fabricators to buy gears from outside sources.

The company's business was not seasonal, nor did prices vary much. In arriving at prices the company added to the cost of raw material a predetermined figure per man-hour of labor. That figure included allowance for all expenses, direct and indirect, and for net profit. In this way, one item was held to be as profitable to the company as another. All sales were made f.o.b. factory. The company's terms were 2% tenth of the month following date of shipment, 30 days net. These terms were not adhered to strictly, and the company was willing to make some variation in its prices and in its terms in order to meet competition. The company did not keep records of repeat orders and new orders separately, but estimated that at least 20% of its sales were on repeat orders.

In its eastern territory the company maintained three salesmen, each of whom sold the company's full line. The salesmen did not have exclusive territories. About once each week they reported at headquarters and each was given a list of actual and prospective customers upon whom to call in the following week. In one week one salesman might work in a particular territory and in the next week another salesman might work there. Salesmen's call lists were compiled by the sales manager from inquiries and orders received and from *Bradstreet's Ratings, Dun's Reference Book,* and other directories. The salesmen solicited orders and also made goodwill calls upon regular customers. The gen-

eral sales manager of the Exton Gear Company stated that the salesmen had found that purchases of gears were in general controlled, not by the buyers' purchasing agents, but by the engineers or master mechanics. Flat salaries of about $3,500, exclusive of expenses, were paid the salesmen.

Outside of the eastern territory the company depended for orders entirely upon its advertising and price catalogs. For 10 years the company had advertised extensively in trade papers, periodicals devoted to business, and business directories. Among the mediums used were *American Machinist, Machinery, Iron Trade Review, Factory, Industrial Engineering,* various textile papers, *Hendrick's Directory,* and *Thomas' Register of American Manufacturers.* Usually three times each year the company inserted a full-page or a two-page advertisement in each magazine and trade paper that it used. In the other issues the company ordinarily used quarter-page advertisements. A typical quarter-page advertisement pictured a particular type of gear, described the gear briefly, and stated that a full description was contained in the company's catalog, a copy of which would be sent to the reader upon request. In the larger advertisements, and occasionally in the smaller ones, a more direct sales appeal was used. This advertising cost the company about $30,000 annually.

Once each year the company issued a catalog in which its standard products were described and their prices given. The annual cost of this catalog, including cost of distribution, was over $10,000. This was the only direct-mail advertising done by the company.

As a means of controlling its sales activities, the company made weekly and monthly comparisons, by states, of current sales and sales in the corresponding periods of the previous year. The company did not separate its sales figures except by states.

The company wished to extend its market as far as possible and was willing to accept an order of any size. The executives recognized that some manufacturers of industrial goods deemed it advisable to limit their markets. The executives of the Exton Gear Company, however, wished to make a sale wherever a sale could be made.

In the company's opinion, wider distribution might be secured for Exton products if those products were sold on consignment by supply firms or hardware wholesalers located at strategic points.

This would make possible quicker deliveries of standard gears which could be carried in stock. Quick delivery, the sales manager stated, frequently was an important consideration in the purchase of gears. The company had discussed the matter with several distributors, but no agreement had been reached inasmuch as the distributors wanted 50% discount from catalog list prices and the company was unwilling to allow more than 40%. To all its customers, the company allowed from 20% to 25%.

Establishment of sales branches was deemed impracticable by the company because of the cost. The expense of employing additional salesmen to cover the entire United States also seemed prohibitive.

COMMENTARY: The Exton Gear Company, like many other companies, desired to increase its sales. The company's market, however, was a varied one, and it hardly was to be expected that each segment of the market offered equal sales opportunities. The company's market included purchasers of gears of practically all sizes, purchasers of gears for fabricating purposes and purchasers of gears for factory equipment, purchasers of standard gears, and purchasers of special-order gears. It was not at all likely that an increased volume of sales could be made immediately with equal facility to each of these groups of customers, nor was it probable that all sections of the market held equally attractive opportunities for future development. The major issue which this case presents, therefore, is the method of determining the field or fields to which the chief marketing efforts should have been directed.

The first step that the company should have taken was to make a systematic analysis of its current and past sales, in order to ascertain the relative importance of the various groups of customers and the trend of its market. This analysis should have shown such facts as the sales of gears of different sizes, grouped into classes for convenience in tabulation; also sales for plant equipment and sales for fabricating purposes. In these tabulations the sales of standard gears and of special-order gears should have been shown separately. In addition to showing the total amount of sales annually of each class and type, the number of orders and the typical size of orders for each class and type should have been ascertained. Another significant fact would have been the percentage of total orders from the eastern market obtained by salesmen. The cost system also should have been scrutinized to ascertain whether it gave a true picture of the relative profitableness of different types of orders, a point concerning which doubt might well exist.

The expense of making such an analysis of sales and costs would not have been inconsiderable, but the knowledge which the analysis

would have yielded was essential for the intelligent handling of the company's problem.

The list of points to be covered in such an analysis indicates a method of attack rather than a hard and fast formula. As the analysis proceeded, the need for modification and amplification of the program doubtless would have become apparent. In addition to the analysis of the company's records, furthermore, attention also should have been given to the possibilities of obtaining external facts regarding market opportunities. The relative importance of promptness in delivery and of punctuality in delivery as patronage motives should have been ascertained. It is probable that for some types of customers quick deliveries were required, whereas other types of customers were more interested in assurance that deliveries would be made on dates specified than in securing immediate shipments.

The survey should have ascertained the regularity of demand and the degree to which it was sporadic, another point on which marked differences very likely existed between different types of customers.

Such facts as these would have indicated whether the emphasis in the company's marketing program was to be placed on orders for standard gears or on orders for special-order gears, on orders from fabricators or on orders from factories buying gears for equipment purposes. This information would furnish a guide to the sort of sales promotion and advertising methods to be used. If the emphasis was to be on sales to fabricators, for example, it would be necessary to carry on a searching campaign to locate new prospective customers and to arrange, perhaps, for offering them technical sales service, whereas the equipment market was more clearly defined and the specifications of customers in that market largely predetermined. This information also would have helped to determine whether sales should have been made to distributors or only to fabricators and users. The question of utilizing the services of distributors was one which could not safely be disposed of merely on the ground that the discount which they demanded was or was not deemed satisfactory by the Exton Gear Company.

This case gives a typical illustration of the problems facing numerous manufacturers of industrial goods, where the first need is for a thoroughgoing analysis of their sales records, of their markets, and of their operating methods.

September, 1927 M. T. C.

Tasman Gauge Company[1] (A)

MANUFACTURER—GAUGES AND TEST BENCH SETS

Merchandising—*High-Priced Product Replaced by One of Lower Price.* The company, a manufacturer of gauges, discontinued the manufacture of an automobile cylinder gauge it had been selling at $21 each and began making an improved gauge for testing cylinders, to be sold at $55. The company was unable to sell the new gauges readily because of their high price. It decided, however, that a ready market could be found for a reliable but inexpensive gauge. Accordingly, it developed a gauge that was as serviceable as the $55 gauge but which, being made of less expensive materials, could be sold at $17.50. Sales of this new gauge were satisfactory.

Merchandising—*Addition of Product to Line.* Because it had unused factory capacity and wished to increase its line of products sold to the automotive industry, the company, which manufactured bench machinery and various types of gauges, decided to add to its line a patented bench set for testing various automobile parts and adjustments. Sales of the bench set were expected to increase sales of gauges, since a gauge was included with each set.

(1923-1927)

The Tasman Gauge Company, in 1927, had an opportunity to manufacture and market a patented set of instruments for testing various automobile parts and adjustments. The patent was held by a man who had no production or marketing facilities at his disposal. If the Tasman Gauge Company manufactured and marketed the instruments, it would pay the patentee a royalty based on sales. It was necessary for the company to decide whether it wished to add this set of instruments to its line and, if so, the price at which the set should be offered for sale.

The test set was designed for use by automobile manufacturers, garages, and automobile service stations and repair shops. It was compact, simple to use, and would give accurate results whether used by skilled or unskilled workmen. The complete set included a bench, a vise, V's, a magnetic gauge mount with dial gauge, extra points, and two sizes of suction cups and handles. The set could be used for testing 21 different parts and adjustments. Among other things it would show connecting rod and wrist-pin play, end play of camshaft and crankshaft, wrist-pin wear, square-

[1] Fictitious name. See also Tasman Gauge Company (B), page 328.

ness of valve face and stem, unevenness of small, flat surfaces, and measurements of valve openings; it also would check rear-end and flywheel adjustments, could be used as a thickness and surface gauge, and had a bench and vise for small work.

Under existing conditions the accuracy of the automobile parts and adjustments which the bench set was designed to check was judged either by appearance, feel, trial and error, or by use of inside micrometers. Inside micrometers were stated to be awkward to use, and their readings depended, to some extent, upon the person using them. The test bench set provided a means for quick, accurate, and impersonal testing and would have a wide application in even the smallest repair shops.

The executives of the Tasman Gauge Company were convinced that the test bench set would be a profitable investment for firms engaged in repair work on automobiles, as well as for automobile manufacturers and owners of fleets of trucks. The vice-president stated that inasmuch as repair shops and service stations commonly charged flat, standard rates for the various jobs which they performed, use of the bench set, since it would reduce the time required for the jobs, should be distinctly advantageous to those firms. The dial gauge that was included in the set, moreover, could easily be read by car owners, so that shops using the test set had a means of demonstrating to their customers the need for repairs or readjustments and the accuracy of work done.

In 1927, when this opportunity arose, the company was manufacturing bench machinery, micrometer dial gauges for use by manufacturers in testing the dimensional accuracy of parts or materials, and cylinder gauges and crankshaft gauges which, like the test bench set, were for use by the automobile industry.

Prior to 1913 the company had manufactured cylinder gauges which it sold directly to users for $21 each. Sales of these gauges had been reasonably satisfactory. In 1913, however, the company had developed an improved gauge for testing cylinders to ascertain whether the walls were smooth and of equal diameter at all points and had discontinued manufacturing the $21 gauge. The improved gauge was decidedly more accurate and satisfactory in use than was the $21 gauge. It was excellently made in every particular, and was priced to users at $55. In deciding to replace the $21 gauge with the $55 gauge, the company had been following its established policy of selling goods of the highest

grade only. The company had made no effort to determine what the demand for the more expensive gauge would be before undertaking to market it.

The company had planned to sell the improved cylinder gauge through wholesale firms handling automotive equipment. The salesman whom the company employed to introduce the product to those distributors succeeded in stocking them with the gauges. The wholesalers, however, were unable to dispose of the gauges and returned them in large quantities to the factory. The wholesalers stated that the price was too high, that it was impossible to sell a single-purpose tool to garages and repair shops at that price. The company reduced the price to $37.50 and later to $30, but still was unable to sell the instrument except to automobile manufacturers and to some service stations for expensive automobiles. In the absence of cylinder gauges, cylinders were tested roughly by appearance and trial or by means of inside micrometers. Inside micrometers were sold for approximately $3.50 each.

In 1923, one of the executives of the company came to the conclusion that a ready market could be found for a reliable but inexpensive cylinder gauge. A small firm, in fact, was then making cylinder gauges to sell for $15 each and apparently had more business than it could handle. At that time there were approximately 100,000 automobile repair shops and service stations in the United States, most of which were small. This executive proposed that the company develop a cylinder gauge to sell for less than $20. Other executives opposed this step on the grounds that the company's products always had been of the highest quality. The company finally decided, however, to produce an inexpensive gauge.

The inexpensive gauge that was developed was fully as serviceable as the $55 gauge; in fact, with a special, patented handle which made the gauge self-setting and dispensed with the use of outside micrometers, the instrument was more useful than the $55 gauge, which necessitated use of micrometers. The difference in cost resulted principally from the fact that less expensive, though fully as satisfactory, types of materials were used in the new gauge and that that gauge was not polished and finished with the elegance that characterized the one previously manufactured. The company decided upon a list price of $17.50 for the new gauge with the special handle, and upon a list price of $15 for the gauge with a plain handle.

The company decided to sell the cylinder gauge through wholesalers, known as automotive jobbers, handling garage equipment and accessories. These wholesalers, of which there were about 800 in the United States, in turn sold to garages and repair shops. Each wholesaler sold from 1,000 to 1,500 different items. To sell to the wholesalers, the company made use of seven manufacturers' agents who sold garage equipment. These agents were well known to the wholesalers, and visited them regularly several times each year. The company allowed the wholesalers a discount of 40% from list prices and paid the agents a commission of 10% of net invoice value of orders. On orders of 10 or more gauges the company paid the freight; on smaller orders its terms were f.o.b. factory. For a time the company had offered a sliding scale of quantity discounts. This had been discontinued, however, because it appeared to confuse purchasers and to focus their attention on the company's price system rather than on the product.

To assist the wholesalers in selling the gauges, the company regularly inserted page and half-page advertisements in 10 automotive trade papers and supplied the wholesalers with literature for distribution to their customers and with electrotypes for use in their catalogs. In its advertising the company emphasized the fact that the cylinder gauges would assist users to increase their business. For instance, in one of the company's circulars it was stated:

> Every automotive shop should have a Tasman Cylinder Gauge.
>
> Shops equipped to remachine cylinders have an investment in hones, boring machines, grinding machines, laps, reamers or other tools for doing the work. To get returns from this investment in equipment, cylinders must be found that are worn and the owners of those cylinders convinced that remachining must be done for the good of their motors.
>
> The amount of wear, how much to remove to make them straight and round, assurance that all cylinders in the block are of equal diameter, and the measurement of the new diameter in thousandths of inches after remachining must be determined by the Tasman Cylinder Gauge. No other tool or machine will give these very necessary facts as quickly, accurately, and consistently —therefore there is no substitute for the Tasman Cylinder Gauge. Using the Tasman Cylinder Gauge gives assurance of accurate workmanship, brings out the best results from the remachining equipment used, and guarantees against possible "come backs" from customers. There is no guesswork about the need of remachining, the correct diameter, or accuracy of the finished job

when the Tasman Cylinder Gauge is used. The Gauge always registers the same, no matter how many times it is inserted into cylinder, and regardless of who uses it.

Those shops which do no cylinder remachining, sending worn cylinders to specialists who do the work for them, have an equal need of the Tasman Cylinder Gauge. They should try a gauge into every open cylinder, be on the lookout for worn cylinders, and check the accuracy of those they have remachined. As contractors for the work with car owners, they are responsible for the accuracy of the completed job and should insist on perfect remachining.

$17.50 For the Best Cylinder Remachining Salesman You Can Obtain

And, in another circular, the company said:

To increase demand for cylinder refinishing service and replacement parts, try a Tasman Gauge in every open cylinder.

In the four years following their introduction the company sold 60,000 of the inexpensive cylinder gauges. Most of these sales were of gauges with the self-setting handle. In addition to repair shops and service stations, manufacturers of motor cars, trucks, airplanes, and marine motors, firms regrinding cylinders, and also owners of fleets of automobiles or trucks used Tasman cylinder gauges. Manufacturers of equipment to refinish cylinders also equipped their demonstrators with the Tasman gauges. The cylinder gauge, in fact, became the company's most popular product and was able to carry part of the advertising expense of the other Tasman lines. On each cylinder gauge which it sold, the company made a net profit of $4.

The company's crankshaft gauge had been marketed first in 1925. Like the cylinder gauge with the self-setting handle, it was priced to users at $17.50. Sales of this instrument had been satisfactory, although it had proved to be less popular than the cylinder gauge. This lesser popularity, in the company's opinion, was accounted for by the fact that the crankshaft gauge did not have so general an application as did the cylinder gauge. In the usual course of their businesses, repair shops and service stations had comparatively few opportunities to apply the crankshaft gauge. Moreover, lack of precision in the parts checked by the crankshaft gauge was less serious and more expensive to repair than was lack of precision in cylinder measurements.

The Tasman Gauge Company was interested in the test bench set because it had unused factory capacity suited for manufac-

ture of that item, because it wished to have a larger line for sale to the automotive industry, and because sales of the bench set would increase sales of gauges, since a gauge was included with each set.

The company figured that at a list price of $30 it would make a net profit of $7 on each test bench set which it sold. This allowed for a 30% discount to wholesalers, 10% commission on net invoice value to the manufacturers' agents, and for prepayment of freight. The company anticipated that after it had manufactured test bench sets for a time means of reducing costs would be discovered.

The company was of the opinion that a 30% discount to wholesalers was adequate. The 40% discount on the cylinder gauge had been allowed because of the method of quoting prices used by the company's chief competitor for that product. This competitor had begun to manufacture a cylinder gauge similar to the Tasman gauge about the same time that that gauge was placed on the market. The competing gauge was very much like the Tasman gauge without the patented, self-setting handle. The manufacturer allowed wholesalers a 40% discount from list and expected them to sell to their customers at 15% from list. The Tasman Gauge Company, on the other hand, expected wholesalers to maintain its list price. To meet competition, however, the company had deemed it wise to allow the 40% discount. The company did not know to what extent the wholesalers sold Tasman gauges below the list price, but was of the opinion that in many instances they did so.

The company decided to manufacture and market the test bench set and to set the list price for the complete set at $30. Wholesalers were to be allowed a discount of 30%, and the company was to prepay freight on all shipments. Each set weighed 25 pounds. If a customer wanted a rush shipment by express, the company would allow freight, provided the order was for at least four sets. The manufacturers' representatives would be allowed 10% commission on this item as on the cylinder gauges. The company had not yet decided whether it would offer quantity discounts. The company also decided to offer the magnetic gauge mount with the dial gauge separately for $15, and the two suction cups and handles separately for $2.50, but to encourage customers to buy the set complete. To each of the 800 wholesalers the com-

pany sent a circular describing the new product and explaining the proposed selling terms. No complaints were received concerning the 30% discount. The company planned to send circulars to the wholesalers every 2 or 3 weeks until the new product was established. Trade paper advertising also was to be done for this item.

COMMENTARY: In proposing to price the new bench sets at $30 list, the company had its experience in marketing gauges for guidance. The cylinder gauge priced at $55 list had not been successful commercially, whereas the gauge priced at $17.50 had been sold in large volume. This experience shows that price exerted a strong influence on the decisions of purchasers of such equipment and indicates that the list price for the bench set should not have been placed higher than the $30 figure which covered estimated costs and expenses, yielded a good net profit to the manufacturer, and allowed ample margins for the wholesalers.

If $30 is accepted as the maximum list price that it was wise to place on the bench sets, the question then remains whether the price should not have been placed lower. On this point, the first consideration is that of the possibility of reducing costs. In view of its previous experiences, the company, in estimating the costs of the bench set, presumably did not contemplate the use of materials of unnecessarily high quality, such as had been used in the $55 gauges, nor allow for unnecessary refinements in finish and polish. Hence it can be concluded that the costs of producing the bench set could not have been reduced materially and that the set had to be listed at approximately $30, if it was to be placed upon the market.

In forecasting the company's likelihood of success in marketing the bench set at a $30 list price, the first consideration is that the set could be used for a variety of purposes, in contrast to the $17.50 cylinder gauge, which was a single-purpose instrument. This difference in number of uses would counterbalance much of the difference in price. The buying motives for the bench set, other than variety of uses and price, moreover, were fully as strong as the buying motives for the cylinder gauge. The instruments in the bench set, like the gauge, were dependable in use; they made accurate, impersonal measurements. The bench set also was economical in use. It enabled users to handle repair jobs more quickly and more cheaply than they could be handled without the set. The strongest buying motive for the bench set, finally, was the same as the one exploited in the advertising of cylinder gauges —enhancing the salability of the users' services. By using the bench set a repair man could demonstrate to his customers the nature and extent of the repairs needed; his sales task, therefore, could be lightened by the use of the bench set.

In view of the strength of the buying motives to which appeal could be made and the diversity of purposes for which the bench set could be utilized, the company fairly could have expected to secure a satisfactory volume of sales for the bench set at the list price of $30, the figure which was arrived at by consideration of production costs, marketing expenses and margins, and net profit.

July, 1927 M. T. C.

Tiber Body Company[1] (A)

MANUFACTURER—BUS BODIES

Merchandising—*Change in Product to Reach More Profitable Market.* The company, a manufacturer of bodies for pleasure automobiles, decided to discontinue the manufacture of automobile bodies and instead to manufacture bodies for motor busses. The company's market for automobile bodies had been contracting, and price competition had been growing severe. The market for bus bodies, on the other hand, apparently was a growing one.

(1924)

The Tiber Body Company had begun to manufacture automobile bodies for pleasure cars in 1919. In 1923 it experimented in designing bodies for automobile busses. Inasmuch as the bus market seemed to officials of the company to offer greater possibilities than the market for bodies for pleasure cars, the company, in 1924, decided to transfer its operations entirely to the new market. Manufacturing conditions were such that the company could not satisfactorily build both types of bodies.

The officials of the company had had many years of experience in the designing and building of bodies for vehicles. This experience extended back to association with carriage manufacturing companies noted for the quality and superior design of their products. The Tiber Body Company had been organized and a factory had been built in Detroit several years prior to 1919, but because of war contract work on which it was engaged the company had not begun to build bodies for pleasure cars until 1919. One of the officials, whose experience in vehicular body manufacture was well known, did all the sales work for the company. He had been able in 1919 and 1920 to secure orders from five or six automobile manufacturing companies amounting in all to over $2,500,000 each year. In 1921 orders had dropped to $975,000, but in 1922 they amounted to about $2,330,000 and in 1923 to about $1,855,000.

Conditions under which orders for building automobile bodies were secured had not been entirely satisfactory to the Tiber Body Company. Several automobile companies in 1919 had taken over

[1] Fictitious name. See also Tiber Body Company (B), page 473.

the manufacture of bodies for their cars either directly, through organization of a body building department or purchase of a body manufacturing company, or through obtaining control of a body building company. The General Motors Corporation, for example, in 1919 secured control of the Fisher Body Corporation and entered into a 10-year agreement by which it was to purchase all its requirements of automobile bodies from the Fisher Body Corporation in so far as that corporation was able to meet them.

Automobile manufacturing companies which did not themselves build or control the building of bodies for their cars usually designed the bodies they desired and submitted the preliminary designs to body builders for bids for a specified number of bodies to conform in general to those designs. Body manufacturers submitted bids on the designs and in some instances suggested alternative designs or changes in body lines or construction. Once a final design was determined upon for any model and specifications were drawn, the orders were given on a price basis to whichever companies could meet the requirements for quality and delivery. Automobile companies which did not build their bodies usually did not place all their orders with the same body building company. The bodies built by the Tiber Body Company were of high quality and well constructed, and the bids submitted by that company for orders frequently were higher than the bids of competitors. While price alone did not always determine the placing of an order, the Tiber Body Company in 1922 and 1923 had increasing difficulty in securing orders except at prices which allowed only a narrow gross margin.

During 1922 and 1923 the officials of the Tiber Body Company had observed a rapid increase in the use of motor busses for passenger transportation. Prior to 1920 the principal use of motor busses had been for sight-seeing. Practically the entire development of bus transportation had occurred after 1920, and by 1923 bus lines had been organized in almost every section of the United States. The bus lines were developing into two types: lines for local short-haul transportation on scheduled routes in a city; and lines for long-haul transportation between cities and even for interstate transportation. Because of the rapid development of the bus industry and the lack of uniformity of designs in bus bodies, only a few body building companies were in a position to take orders for bus bodies. Most of the companies which

built chassis for busses were truck manufacturers rather than pleasure automobile manufacturers; hence the builders of chassis were usually unfamiliar with the principles of passenger body design and construction.

The bus bodies sold prior to 1922, for the most part, were mere shells with very little equipment or provision for passenger comfort.[2] Two types of bodies had developed: the street car type and the sedan type. The street car type was for short-haul, mass transportation and the interior seating arrangement resembled that of a street car. The sedan type was designed for comfort on long rides and seats were placed across the bus bodies with doors along the side of the bus opening at each cross seat. Specifications published in *Bus Transportation* for bus bodies manufactured in 1922 listed 30 companies as manufacturers of the street car type body and 8 companies as manufacturers of the sedan type.[3]

Officials of the Tiber Body Company concluded in 1923 that a large demand was developing for bus bodies for long-haul bus transportation and that if such bodies were developed with emphasis on comfort, beauty, and luxury of appointment, in addition to durable construction, they would increase the salability of the chassis to bus operating companies and would increase the appeal of bus transportation for the public. The officials, therefore, in 1923 experimented with the design of a sedan type bus body to be mounted on a truck chassis. A few of the leading truck manufacturing companies were building their own street car type bus bodies but were buying sedan bodies from the few body manufacturing companies which had developed far enough to furnish these bodies. Buying customs for bus bodies had not yet become well established and this seemed to the officials of the Tiber Body Company to afford the company an opportunity to enter a field in which it could individualize its product, by designing superior bodies of distinctive characteristics which would identify the bodies as products of the Tiber Body Company, and perhaps establish buying habits more favorable to itself than existed in the pleasure car field, where sales were made after competitive bidding on specifications and designs developed by the chassis manufacturers.

[2] A discussion of bus bodies can be found on page 15 of the January, 1923, issue of *Bus Transportation.*

[3] *Bus Transportation,* January, 1923, page 18.

The factory of the Tiber Body Company was modern and could be adapted with only minor changes in equipment to the manufacturing of high-grade bus bodies. From the standpoint of economy in production, however, the company had either to manufacture only pleasure automobile bodies or only bus bodies. Any attempt to manufacture both bus bodies and bodies for pleasure cars with the existing plant facilities would increase the cost of both products. The company could manufacture bus bodies to sell to the chassis manufacturers for between $2,500 and $3,500 each, depending upon the quality of upholstery and interior finish ordered.

The official of the Tiber Body Company who was in charge of sales was not acquainted with officials of truck manufacturing companies inasmuch as all previous sales had been made to manufacturers of passenger automobiles. He selected, however, five truck manufacturing companies which he regarded as leaders in the manufacture of good quality, heavy duty trucks and through personal salesmanship and his reputation as a designer of high quality automobile bodies he succeeded in securing promises of orders for 1924 which almost equaled the company's total sales of pleasure car bodies in 1923. Truck manufacturing companies had been having difficulty in securing deliveries from bus body companies because the rapidly increasing sales of busses had created demands beyond the capacity of bus body builders. Each truck manufacturing company, therefore, frequently was buying bodies from several builders. These truck manufacturing companies, however, indicated their desire to standardize eventually by purchasing all their requirements from one or a limited number of body builders. The advantage of such standardization to the truck manufacturers would be the assurance of uniform quality in all bodies sold with their truck chassis. Although the truck companies did not manufacture the bodies, purchasers of busses invariably complained to the truck companies which sold the busses in case of dissatisfaction with the bus bodies. Defects or inferiority in the bus bodies, therefore, reflected unfavorably upon the reputation of the truck chassis manufacturers.

The Tiber Body Company decided to discontinue entirely the manufacture of bodies for pleasure cars and on the basis of the promised contracts to begin in 1924 the manufacture of high quality bus bodies of the sedan type which it had designed. The

company's sales of bus bodies in 1924 amounted to $2,390,000; in that year sales upon contracts previously entered into for pleasure car bodies amounted to $280,000. The company experienced a loss of $29,000 during the year in which it shifted to the new market.

In the fall of 1924 the Tiber Body Company, as well as several competing companies, developed and exhibited parlor car and pullman types of bus bodies for long-haul transportation. These types practically displaced the sedan type in the favor of bus operating companies. The types developed by the Tiber Body Company were distinctive and with minor changes could be fitted to any of the leading truck chassis. The bodies could not be standardized entirely because a few truck manufacturers requested special features and because there was almost entire lack of uniformity in state laws and municipal ordinances regulating body dimensions, doors, and seating arrangements.

In 1925 four truck manufacturing companies virtually standardized on the Tiber body for the long-haul type of busses and purchased most of their requirements from that company. Two other truck manufacturers also purchased largely from the Tiber Body Company. Sales of the company for 1925 reached $2,950,000 with a net profit of $316,000. The company estimated that sales for 1926 would exceed $3,300,000.

The National Automobile Chamber of Commerce estimated that approximately 70,000 motor busses were in operation in the United States on January 1, 1926, as compared with an estimate of 53,000 for January 1, 1925. In a survey made by *Bus Transportation* in 1925, replies from 91 body builders indicated that 7,640 bus bodies were built during 1924. Of this number, 2,374 were street car type and were built by 56 body builders, and 2,302 were stage type (including sedans, parlor cars, and coaches for long-haul transportation), built by 46 body builders. In a similar survey in 1926, replies from 94 body builders indicated that a total of 11,470 bus bodies were built during 1925. Of that total, 3,847 were of the stage type and were built by 66 manufacturers.

COMMENTARY: The issue before the executives of the Tiber Body Company was that of changing its product and of switching completely from one market to another.

The case furnishes an example of foresight on the part of the executives of the company in turning from a crowded, highly competitive

field, in which the company was not in a strong position, to a new and growing field in which the company had opportunity to draw on the past experience of its personnel, individualize its product, and become a leader.[4]

With the formation of body building departments by automobile chassis manufacturers, the opportunity for sales of pleasure car bodies was actually contracting as far as this company was concerned. Moreover, the lack of diversification in its business and the fact that the methods of obtaining business did not promote continued patronage made the building of pleasure car bodies a very uncertain and risky business, as was shown by the fluctuation of sales from 1919 through 1923.

At the time of change the manufacturers of bus chassis were desirous of securing bus bodies. Although in time the executives of the Tiber Body Company might have expected developments similar to those which had occurred in the field of automobile bodies, namely, formation of body building departments, or subsidiaries, by chassis manufacturers and a change to a highly competitive business obtained upon a basis of bids, in the meantime the rapid growth of bus transportation offered a profitable field for the efforts of the company. Moreover, the company had an opportunity to play a part in the improvement of bus bodies and thus to obtain a reputation in this new field which would prove helpful in attracting patronage, with the further possibility of building an individualized product so well known throughout the trade that it would tend to hold the patronage of the chassis manufacturers.

The problem was simplified by the ease of changing from one type of manufacture to another. Moreover, since pleasure car body business was obtained from a few prospects, largely upon a bidding basis, subsequent change back to the building of bodies for pleasure cars was possible.

July, 1926 N. H. B.

[4] See also Bucklam Box Company, page 75.

Bucklam Box Company[1]

MANUFACTURER—PAPER BOXES AND SPECIALTIES

Merchandising—*Change in Product to Reach More Profitable Market.* In order to escape the severe price competition which was seriously decreasing its sales and profits, the company decided to shift its production, as rapidly as possible, from common, standardized paper boxes to fancy paper boxes with a display value. The new line required more careful salesmanship, but yielded a more satisfactory percentage of profit.

Merchandising—*Addition of Products to Line.* The company, a manufacturer of plain and fancy paper boxes that it sold by means of its own salesmen to manufacturers, department stores, and other firms in New England, decided to add to its line various items for sale to gift shops and to distribute those items nationally through a commission agent.

(1927)

The Bucklam Box Company manufactured set-up paper boxes in a variety of shapes and sizes. The boxes were plain, without decoration, and were sold chiefly on the basis of price. Because of the bulkiness of the boxes in comparison with their value, transportation costs limited the company's market to an area within 50 miles of its factory. The factory was located in an industrial center.

The company's boxes were used for packaging a variety of products; for example, shoes, candy, envelopes, underwear, stockings, and men's garters. The company employed several salesmen to call on users, wholesalers, and large retailers. Unit orders ordinarily were for large quantities of boxes. Usually a customer, before placing his order, secured prices from several manufacturers. Price competition tended to become more and more severe. Buyers kept pressing for lower prices, and manufacturers, many of whom were overproduced, continually were making price reductions so as to secure orders. The Bucklam Box Company made use of a cost accounting system which showed it the cost of each type of box produced. Frequently competitors quoted prices on a certain type of boxes that were less than the Bucklam Box Company's actual cost of production. Executives of the

[1] Fictitious name.

Bucklam Box Company were of the opinion that many of the company's competitors did not know what their actual costs were and consequently often sold their products below cost. Under the strain of this price competition the Bucklam Box Company's sales and profits decreased seriously.

About 1920 it was proposed that the Bucklam Box Company as rapidly as possible should shift its production from common, standardized boxes to fancy boxes with a display value. Such a shift would not require an additional investment in plant. It would, however, involve entirely different sales problems. Price no longer would be of primary significance. It would be necessary to convince potential customers of the sales value of containers and to design containers that would suit customers' tastes. Inasmuch as fancy boxes were used most frequently for gift purposes, there would be a tendency for the business to become seasonal.

The Bucklam Box Company decided to undertake to develop the new lines as proposed. It would continue to manufacture plain boxes but it would not quote prices that did not allow it a reasonable profit. The company had not advertised its plain boxes and it did not plan to advertise the fancy boxes.

The sales manager and the salesmen visited actual and potential users of fancy boxes to discover their needs and to interest them in the use of fancy boxes. Frequently the company prepared from six to a dozen samples for a customer. When these samples were submitted to the head of the packaging department or other executive in charge of the selection of containers, he usually consulted with the salesmen of his firm before making his choice and placing his order. Among the customers for fancy boxes were candy manufacturers, manufacturers of men's belts and garters, manufacturers of children's garments, department stores, and five-and-ten-cent stores. By 1927, approximately half the company's sales were of fancy and half of plain boxes. The company was satisfied with sales of its fancy lines, and its percentage of profit had been greatly improved. Many of its customers, moreover, reported that their sales had increased following their use of the company's fancy boxes.

Early in 1927 it was proposed that the company should begin to manufacture various items, such as fancy wastebaskets and magazine holders, for sale to gift shops. The company had an

opportunity to distribute such a line nationally to gift shops through a firm with representatives in the important cities in the United States. That firm would sell on a commission basis from samples. It would not carry stocks, and the average order received probably would be small.

The company decided to manufacture a line of fancy paper products for gift shops and to distribute them nationally on a commission basis. The company also proposed to advertise that line in trade journals for gift shops.

COMMENTARY: When the Bucklam Box Company added fancy boxes to its line, it manifested merchandising ingenuity. It met devastating competition constructively by entering a field in which it could reap a reward for developing new ideas.[2] Since its success in the new field was likely to lead some of its less alert competitors into that field, further merchandising progress by the company was likely to be essential.

The decision of the company to engage in the manufacture of novelties for sale to gift shops, however, was not so clearly a step in the right direction, unless the company desired to change radically the character of its business. The gift shop market was an altogether different market from the box market, and called for different merchandising and different marketing methods. If the company planned to shift its major interest from the box business to the gift trade, the utilization of a commission agent for selling its output might be advantageous for a temporary period. Sooner or later, however, the company probably would find it desirable to have closer acquaintance with its market and firmer control of its sales than could be secured when it entrusted its sales to a commission agent.

December, 1927 M. T. C.

[2] See also Tiber Body Company (A), page 69.

Massasoit Leather Company[1]

MANUFACTURER—SHOE LEATHER

MERCHANDISING—*Liquidation of Inventory Resulting from Faulty Merchandising.* The company, which had been organized to manufacture bark-tanned leather for the uppers of work shoes, continued to expand its business even after the demand for this type of leather began to be affected by competition from colored side leather on the basis of style and from chrome-tanned leather on the basis of price. In 1922, when the company was operating under a receivership, there was on hand a large inventory of heavy bark-tanned leather. The receivers, who wished to convert the inventory into cash in order to produce colored side leather and chrome-tanned leather on a large scale, were uncertain whether to liquidate the inventory immediately at a low price or to postpone liquidation in the hope of selling the leather slowly at better prices.

(1922)

Because of injudicious expansion and failure to forecast the hide and leather markets correctly, the Massasoit Leather Company, during a period of severe depression in the leather trade, was forced to undergo a receivership. One of the first problems engaging the attention of the receiver was the disposition to be made of an inventory of finished leather, amounting nearly to $1,000,000, mostly heavy, bark-tanned leather in black finishes.

The Massasoit Leather Company originally was organized to manufacture bark-tanned[2] leather for the uppers of work shoes, and its operations had expanded gradually until it had become one of the largest producers in the work shoe leather industry. In 1915 several tanners, anticipating an increasing demand for dress shoes, started the production of colored side leather[3] for use in cheap shoes of that type. The Massasoit Leather Com-

[1] Fictitious name.

[2] Tanning is a process producing a chemical change in a hide or skin, resulting in the formation of leather. Tannin or tannic acid, which is the active transforming agent, is found in numerous plants; hence there is a wide variety of vegetable tannages. The vegetable tanning process sometimes is carried on by the use of the bark or wood itself, but more frequently by the use of liquids extracted from the bark, wood, or fruits of various plants. The chrome, or mineral, process of tanning employs chrome salts, usually bichromate of potash or bichromate of soda. One of the great advantages of this process is the shorter time required. Most calf and kid upper leather is of chrome tannage, as is also much side leather.

[3] Cattle hides to be tanned into upper leather are trimmed and divided into two sections or sides. Sides are split into grains and splits, the grain being the outer

pany, however, was slow in recognizing the demand for colored side leather. In 1917, on the entrance of the United States into the World War, the government insisted that tanners whose facilities were adapted to the manufacture of heavy leather should concentrate on it in order to supply shoe manufacturers who had government contracts for army shoes. High wages during the war changed the aspect of the work shoe business. Men who formerly had purchased only work shoes made of heavy bark-tanned leather began to demand dress shoes either of calf or colored side leather.

After the war, however, the Massasoit Leather Company continued to manufacture the same types of leather as previously, except in one tannery where the manufacture of light-colored side leather was introduced during the autumn of 1919. Business was good in the latter part of that year, and executives of the company confidently expected that it would remain so. Large quantities of hides were purchased at top prices. Even when it was realized that the market was at the peak, railroad congestion was delaying delivery of hides so seriously that the management continued to purchase "spot" hides so that its tanneries might have an adequate supply of raw material. During 1920, however, prices of hides declined rapidly, and the Massasoit Leather Company was forced to write down inventories of finished leather in accordance with replacement values of hides. At the same time, several shoe manufacturers who owed the company for leather became involved in financial difficulties, and the company was unable to collect payment. It became necessary, therefore, for the company to go to the banks for additional funds, and eventually bank loans totaled over $3,000,000. Late in 1920 the company stopped the production of bark-tanned leather.

The Massasoit Leather Company belonged in general to the group of tanners who followed the policy of buying low-grade raw material, operating on a large scale, and making medium-grade leathers that could be sold in large lots. Shoe manufacturers to whom it sold leather distributed their products for the most part through wholesalers.

surface, and the splits the inner layers. This type of leather is known as side leather, and practically every known finish of calfskin has been more or less successfully imitated in side leather. The texture of side leather is not so fine as that of calfskin, nor does it have the grain marking of calf leather. It is possible, however, to produce an artificial grain in side leather by various methods of embossing and printing.

The sales of the Massasoit Leather Company were handled from the Boston office by a sales manager and four salesmen paid on a straight salary basis. In New York City, St. Louis, San Francisco, and foreign countries orders were obtained by commission firms; the commissions varied from 2% to 5% of net sales, according to conditions. Trade in Chicago was taken care of by a firm of two men who received salaries and a commission of 2% on net sales above $450,000. Samples were carried in New York City, St. Louis, and San Francisco; a small stock was carried in Chicago. Sales ordinarily were made only after inspection of samples or stocks by buyers.

Because of the variations in grades, uniform market prices could not be established, and no price quotations could be published that were of assistance in determining market values. The Massasoit Leather Company learned the prices of other tanners, therefore, principally from the reports of salesmen and the statements of leather buyers. All orders received had to be confirmed by the sales manager, who exercised his own judgment freely as to whether the company could afford to sell at the prices tentatively agreed on between the salesmen and the buyers. The approval of the sales manager also had to be secured for all sales made by representatives of the company who were selling on a commission basis.

In July, 1922, when the receiver was appointed, 65% of the Massasoit Leather Company's inventory consisted of heavy, bark-tanned leather. This stock had been on hand for more than 18 months; in January, 1922, it was inventoried at 22 cents per square foot for top grades. There was a normal price differential of from 1 cent to 2 cents between grades. On an inventory taken by a representative of bank creditors in April, 1922, however, this part of the stock was inventoried at 20 cents per square foot. For the most part it had been manufactured from high-priced hides, and its value had been written down twice prior to January, 1922. It was a question in July whether to place a low selling price on this leather in order to liquidate the stock or to postpone liquidation in the hope of being able to sell the leather slowly at better prices.

Work shoes made of bark-tanned leather always had been cheaper than other shoes. One reason for this was that the bark-tanning process produced a better "split" than the chrome

process, which had an astringent effect. Since in tannery cost accounting splits were treated as by-products, "grains" of bark leather could be produced more cheaply than "grains" of chrome tannage. Popular grades of bark-tanned leather, therefore, had sold for a long time at a price about 4 cents per square foot below that for chrome-tanned work shoe leather. Through improvements in the process of tanning by several competitors of the Massasoit Leather Company, however, the quality of the splits obtained from the chrome tanning process had been brought to a point where chrome-tanned grains could be produced almost as cheaply as bark-tanned grains. Thus at the same time that the style tendency set against bark leather, a reduction in the price differential between the two types of leather gave further impetus to the movement away from bark leather. At the same price as competing leathers, heavy bark-tanned leather was not in demand. The rise in hide prices during the first six months of 1922, however, affected the more popular types of leather before it did bark-tanned leather and began to restore the price differential. It was then a question whether the buying power and style preference of purchasers of medium and low-priced shoes would be such that a differential of a few cents per square foot in the price of leather would lead shoe manufacturers to substitute bark-tanned leather for colored side leather or for the various chrome tannages of work shoe leather.

In July, 1922, the Massasoit Leather Company needed to turn its inventory into cash in order to buy hides and resume operations on a large scale; apparently a new period of general business prosperity was beginning. The bulk of the company's production at that time was colored side leather, and the remainder was chrome-retan[4] work shoe leather. Since the demand apparently was good for those leathers, the Massasoit Leather Company wished to increase its output; it was especially desirous of increasing the sales of chrome-retan leather for work shoes.

Despite the urgent need for cash, several executives were of the opinion that it would be advisable to sell the bark-tanned leather gradually in order not to flood the market with larger quantities than it readily could absorb. The existence of the large stock of bark-tanned leather belonging to the Massasoit

[4] The retan process is a double process, consisting of a primary chrome tannage followed by a vegetable extract tannage.

Leather Company was well known in the leather trade. Other tanners had hesitated to produce similar merchandise during 1920 and 1921, and in 1922, therefore, the company's competitors had only small stocks of this kind of leather.

COMMENTARY: The predicament in which the company was involved with its stock of bark-tanned leather was the result of failure to foresee an impending business crisis and of failure to forecast the character of demand. It is with the second aspect of the company's problem that this case primarily is concerned.

The difficulty which the company was experiencing in liquidating its inventory of bark-tanned leather reflected the influence of consumers' buying motives on the merchandising of fabricating materials. Many consumers no longer desired shoes made of heavy black leather, even at prices below those placed on shoes made of other types of leather. Personal comfort and style had come to have more influence than price on consumers' purchases of shoes. Hence, shoe manufacturers instead of purchasing heavy black leather were purchasing leather of the sorts that could be made into popular styles of shoes.

A heavy loss on the leather inventory of the company was inevitable. In July, 1922, the stock had been on hand for 18 months; two reductions in price had been made; and the demand for the heavy black leather had not improved, nor was there any evidence that a material improvement in the demand for that type of leather was to be expected within a reasonable time. Under these circumstances the prices should have been reduced to a point where the leather could be sold expeditiously. Nothing was to be gained by continuing to carry the inventory, and the longer it was carried, the greater would be the loss resulting from the carrying charges incurred.

Just as a retailer finds it advisable to liquidate promptly stocks of merchandise decadent in style, so a manufacturer should liquidate expeditiously stocks of fabricating materials for which the demand is waning.

November, 1927 M. T. C.

Artificial Leather Distributing Company[1]

MANUFACTURERS' AGENT AND WHOLESALER—UPHOLSTERY HAIR

MERCHANDISING—*Addition of Product to Line.* A Cleveland firm manufacturing curled hair for upholstery purposes asked the company to represent it as manufacturer's agent in New England. The company already was New England agent for a company making artificial leather and also did a wholesale business in artificial leather. Because users of artificial leather also used curled hair, the company decided to accept the offer of the Cleveland company. The company was unable to secure orders for the new line, however, and after six months discontinued it.

(1925)

In 1925 a Cleveland firm which manufactured curled hair for upholstery purposes asked the Artificial Leather Distributing Company to represent it as manufacturer's agent in New England. That company was interested in adding to its line and hence investigated the offer of the Cleveland firm.

The Artificial Leather Distributing Company was manufacturer's agent in New England for a Pennsylvania company manufacturing artificial leather. In addition, the Artificial Leather Distributing Company did a wholesale business in artificial leather, chiefly in oilcloth of a type not produced by the Pennsylvania manufacturer. The company's annual sales for the Pennsylvania manufacturer amounted to approximately $250,000, and the wholesale business amounted to from $125,000 to $175,000 annually. Although it was smaller in volume, the wholesale business was the more profitable. The distributor's commissions on sales for the Pennsylvania manufacturer for all except a few qualities of the artificial leather ranged from 1½% to 2½%. On a few of the better grades the commission was 5%.

The Artificial Leather Distributing Company maintained four salesmen in New England. These salesmen called on prospective customers, submitted samples, and quoted prices. The smaller customers placed orders with the company's salesmen, but the larger customers ordinarily preferred to correspond directly with the manufacturer. All orders were filled from the factory and control of credits and collections was centralized there.

A wide variety of manufacturers used artificial leather. Among

[1] Fictitious name.

the company's customers were firms manufacturing upholstered furniture, automobiles, baby carriages, suitcases, shoes, women's belts and bags, tennis rackets, and automobile trunks and tire covers.

The Cleveland manufacturer of curled hair offered the company a 5% commission on all sales made in New England. All shipments would be made from Cleveland, and collections would be handled there. The manufacturer at that time was advertising in a few trade papers circulating in New England.

Inasmuch as the market for the curled hair was the same as one of its important markets for artificial leather, the Artificial Leather Distributing Company decided to accept the offer of the Cleveland firm.

The Artificial Leather Distributing Company, in order to introduce the new line effectively, employed one salesman to sell that line only. For six months this salesman called on users of curled hair to solicit orders. He secured almost no orders, however, and at the end of six months the company discontinued all efforts to sell the line.

This failure was ascribed by the Artificial Leather Distributing Company to three facts: competition was keen in curled hair for upholstering uses; the curled hair manufactured by the Cleveland firm had no qualities which rendered it superior to competing hairs; and users preferred to buy the goods of manufacturers located near by.

COMMENTARY: The experience of the Artificial Leather Distributing Company as a sales agent for curled hair was a common business episode. The Cleveland firm, casting around for new markets, thought it would try New England. Curled hair was used in New England; and why should that firm not secure a part of the business? The manufacturing company therefore sought a manufacturers' agent who would become its sales representative in New England, with no expense or risk to the manufacturer.

The Artificial Leather Distributing Company welcomed an opportunity to increase its volume of sales, and, inasmuch as it was selling other materials to curled hair users, why should it not sell them curled hair? Hence the agency was accepted. Many business plans are being adopted daily as the result of reasoning closely analogous to that of the manufacturer and agent in this case.

Neither party to the arrangement, however, manifested alertness in comprehending the marketing problem involved, which was to find out

in advance whether there really was a potential market in New England for the Cleveland curled hair manufacturer's product. A few days of careful inquiry in advance should have revealed facts that would have led to the conclusion that the company reached by six months of experimenting. The cost of the experiment may not have been heavy, but it certainly was much more than the cost of a preliminary inquiry would have been. Furthermore, when the company hired a new salesman especially for selling curled hair, it largely controverted the reason which it gave for accepting the agency.

October, 1927 M. T. C.

Sallust Alloy Steel Corporation[1]

MANUFACTURER—ALLOY STEELS

Merchandising—*Development of Alloys to Meet Special Needs of Customers.* To avoid direct price competition and to be able to market its steel on the basis of quality and service, the company developed various alloys to meet special requirements of steel users. When it developed a new composition for a customer, the company commonly required the customer to agree to purchase the entire quantity that it was necessary to make up in order to secure a sample, on condition that the sample proved satisfactory.

(1928)

During the period from about 1913 to 1928, the Sallust Alloy Steel Corporation had developed and standardized several special analyses of alloy steel. In addition to these compositions, which it carried in stock in bars, the company had developed analyses for various special purposes and was continually developing new compositions, either upon its own initiative or at the solicitation of steel users. It was the executives' opinion that a comparatively small steel company which developed alloys to meet special needs was in a much firmer marketing position than was a small company which undertook to sell standardized commercial steels.

Various problems arose in connection with the development and sale of new compositions. One of these was the question of whether a customer for whom a special composition had been developed should be required to guarantee purchase of the minimum quantity that could be produced, on condition of satisfactory performance of a trial lot.

Sallust special steels were not patented, since it was not possible to patent chemical analyses. They were sold under registered trade names, however. The general sales manager of the company stated that there were many purposes for which straight carbon steels were satisfactory. For certain machinery parts subjected to severe service, however, steels that were more enduring and more uniform in quality, as well as lighter, than straight carbon steels were necessary or at least desirable. It was to meet such needs that the company had developed its special compositions.

[1] Fictitious name.

Each of the compositions that the company sold regularly as standard merchandise was designed for particular uses. The chemical analyses were changed slightly from time to time as the company discovered means of improving them, but they were, in the main, standard and users could depend upon obtaining additional quantities of the goods from stock at any time.

In addition to the standard grades of Sallust steels, the company had developed special analyses such as spindle steel, auger bit steel, and gun barrel steel. The general sales manager stated that these compositions were purchased in larger quantities and were more competitive, and hence less profitable, than the standardized compositions. Most customers for Sallust standard steels bought in comparatively small quantities and were more interested in quality than in prices. Prices of those standard compositions, the sales manager stated in January, 1928, had not been changed for two years, except in the case of a few very large users, yet no complaints had been received even when the price of ordinary commercial steel was falling.[2] The few firms which purchased Sallust standard steels in very large quantities, however, so that a small change in the price per ton made a substantial difference in the total price, expected Sallust prices to move with general market prices of commercial steel.

The Sallust Alloy Steel Corporation in 1928 had 20 salesmen, who covered the territory from Chicago to the eastern coast. Each salesman was given a territory and was allowed a large measure of freedom in developing it. So long as business developed satisfactorily in a salesman's territory, the company did not seek to direct too strictly the salesman's activities. The sales manager stated that the salesmen usually reported their calls voluntarily and sought advice from the main office.

Most of the twenty Sallust salesmen were engineers. Each man, before being put in the field, was given a one or two months' training course at the company's plant. During this course the salesman was required to conduct various tests and analyses of the steels and to write up his findings. The salesmen were paid salaries and commissions. Each salesman owned preferred stock in the company and most of the salesmen also owned a small amount of common stock.

[2] From January, 1926, to May, 1927, the price of steel billets, Bessemer (Pittsburgh), fell from $35 to $33 a long ton. United States Department of Commerce, *Survey of Current Business.*

The company advertised in *Iron Age,* the *Iron Trade Review,* the *American Machinist, Machinery,* and *Transactions of the American Society for Steel Treating.* In this advertising the company featured the trade names used on its products and emphasized its ability to meet the special steel needs of users. Its ability to make quick deliveries on the standard compositions also was stressed. The company also did some direct-mail advertising. For each of its standard analyses, the company prepared for distribution to steel users small leaflets giving pertinent technical information. The leaflets also stated the sizes in which the company carried the steel in stock and listed machinery parts for which the steel commonly was used. The company also sent to users a small catalog covering its special, as well as its standard, compositions and stating the quantities and sizes of each type of steel ready for immediate shipment. Inquiries received from the advertising were referred to the salesmen.

It was the salesmen's task to call upon actual and prospective customers and to convince them of the merits of using the special alloys instead of ordinary straight carbon steels. Often it was necessary for a salesman actually to demonstrate to the prospective user the superiority of Sallust products. This usually involved actual tests at the user's plant. The Sallust Alloy Steel Corporation supplied samples for these tests. It was the company's policy to charge customers for samples. Such a charge discouraged the salesmen from leaving samples around promiscuously, with firms which were not really interested but which would accept samples to get rid of the salesman. Users also, in the company's opinion, appreciated samples more if they had to pay for them.

The salesmen, in addition to demonstrating and selling the standard compositions that the company had developed, discovered special needs of customers for which the standard compositions were not exactly suited and, in cooperation with the users' engineers and the company's production staff, worked out new compositions. The ability of the Sallust Alloy Steel Corporation to work out special compositions was well known to steel users and requests for such service frequently were received. When the company was satisfied as to the financial reliability of a firm desiring a special composition, it did not hesitate to have the composition made up provided the customer agreed, if a sample

proved satisfactory, to purchase the entire heat that it was necessary to make up in order to secure a sample.

The Jones Manufacturing Company of Worcester, Massachusetts, for example, asked the corporation for a steel composition from which to make spindles, demanding unusual properties, for a new type of chucking machine that the company was developing. The Sallust Alloy Steel Corporation decided upon a composition suitable for the spindles, but found that it did not conform with any of the analyses which had been developed for other purposes and which were available so that small quantities could be supplied for test purposes. This necessitated the manufacture of a new heat of steel in accordance with the analysis which had been decided upon for the spindles.

The minimum basic open-hearth heat of this type of steel which could be manufactured was 40 to 50 tons, while the initial order which the Jones Manufacturing Company was willing to place was for 2 tons, as the sales of the new chucking machine were not as yet developed. The Sallust Alloy Steel Corporation was desirous of filling this first 2-ton order, as the situation promised large future business after the quality and adaptability of the special steel had been established. Yet the company did not wish to have left on its hands a large quantity of steel of which it might be difficult to dispose.

Inasmuch as the Jones Manufacturing Company was a large and prosperous organization with a reputation for fair dealing, the Sallust Alloy Steel Corporation decided to make up the 40- to 50-ton heat of steel, provided the customer would guarantee to purchase the entire quantity if the first shipment proved satisfactory. A sales contract was drawn up, in which the buyer agreed to purchase 2 tons as a trial order, and if the spindles made from this lot of material possessed the desired properties, he further agreed to purchase the balance of the special analysis heat within one year's time. The trial shipment proved satisfactory and the customer took the entire heat as agreed.

The general sales manager stated that the chief advantage to the company of the specialized nature of its products was the opportunity given for marketing the goods on the basis of quality and service rather than on a strictly price basis.

COMMENTARY: This case furnishes an example of the manner in which a small company in a highly competitive industry dominated by

large manufacturers was able to operate successfully by means of a combination of keen merchandising and technical sales service. The company had turned its relatively small size to advantage by catering to highly specialized needs, with its executives and salesmen giving personal attention to the peculiar requirements of each customer.

The company's confidence in its merchandising ability was attested by its willingness to make up a 40- to 50-ton lot of a special composition when a responsible customer placed a trial order for only 1 or 2 tons. The cooperation received from customers and prospective customers in the study of their needs and the willingness of customers to pay for samples submitted for experimental purposes indicated that the customers also had a high degree of confidence in the company's merchandising ability.

February, 1928 M. T. C.

Charland Chemical Company[1]

MANUFACTURER—SEALING COMPOUNDS AND FLUXES

Merchandising—*Addition of Products to Line.* The company's first product was a sealing compound for sale to manufacturers of packers' cans. Within a few years the company, in order to diversify its line, added liquid flux, also for sale to can manufacturers; labeling adhesives, for sale to canners; shoe cements; and soda lime. The addition of these products involved the company in various sales and distribution problems.

Distribution Channels—*Use of Exclusive Distributor.* The Detroit distributor for the company's line of fluxes, sold chiefly to automobile radiator manufacturers, asked for the exclusive agency for the company's labeling adhesives, for sale to canners. The company granted the agent's request, but the agent was unsuccessful in selling the adhesives. This failure was attributed to the high delivered prices of the adhesives in the Detroit territory and to the agent's lack of technical knowledge of adhesives.

Distribution Channels—*Packaging to Promote Direct Sale to Users.* Among other products the company manufactured soda lime, for use by the medical profession and in industrial laboratories. Large orders from users the company would fill directly, but it referred all small orders to its distributors. It was proposed that the company should package its soda lime in small lots and sell directly to users altogether.

Sales Promotion—*Mail Solicitation Utilized in Preference to Personal Selling.* After several years of direct personal selling of its adhesives, which were used by canners, the company decided to discontinue personal selling and thereafter to solicit orders by mail. The reputation and goodwill built up for the products was, in the company's opinion, sufficient to justify this course.

(1919-1928)

The Charland Chemical Company, located in New England, began operations in 1919, in which year its sales volume was little more than $1,000. Its first product was an improved rubber sealing compound for use by manufacturers of packers' cans. In the period from 1919 to 1927, the company, in order to diversify its line, added several other products. The addition of these products involved the company in various problems of selling and distribution.

In 1927 the company's three most important lines, all of which

[1] Fictitious name.

were sold under the brand name of "Charlo," were sealing compound, flux, and adhesives. Total sales in 1926 were about $1,000,000; more than 80% of this volume was in sales of the three main lines. About one-sixth of the company's sales were of goods for export. To improve its competitive position on the Pacific coast, both as to delivered prices and promptness in delivery, and to facilitate trade with Hawaii, Japan, Australia, and other eastern countries, the company had established a branch factory in Oakland, California, in 1923.

Charlo sealing compound was used by can manufacturers for lining the ends of round, sanitary cans in which food products such as vegetables, fruits, fish, and meats were to be packed. In 1921 the company had developed an improved type of sealing compound and that compound largely had supplanted the older product. The market for sealing compounds consisted of about 50 can manufacturing companies. The most important can making centers were Baltimore, Chicago, Cincinnati, San Francisco, and Seattle.

The Charland Chemical Company's sealing compound had to compete with the products of three manufacturers who, prior to 1919, had supplied practically all requirements of such sealing materials in the United States. One company, located in New York City, had been handling almost 80% of the total sealing compound business in 1919. That company sold directly to users. A second competitor, located in New Jersey, also sold directly to users. The third competitor was on the Pacific Coast and sold through manufacturers' agents.

Prior to the introduction of the Charlo compound, most manufacturers of packers' cans had used as a sealing medium either a film deposit from a solution of rubber in benzol or a formed gasket of rubber or paper. The Charlo sealing compound was stated to be superior to other compounds because it had a proportionately larger rubber content; for this reason the company's compound was slightly higher in price than other sealing mediums. Very soon after its introduction Charlo sealing compound became the standard compound used by large companies manufacturing cans.

Mr. Cook, who was president of the Charland Chemical Company, and Mr. Todd, the vice-president, attributed their success in selling the compound to their technical knowledge of their cus-

tomers' problems and to the merit of the product. Mr. Cook and Mr. Todd studied the problems of can manufacturers in the company's own experimental laboratories and also in the factories of several can manufacturers. The Charland Chemical Company operated a laboratory for testing its own products, the products of competitors, and the cans of its customers. No charge was made for this service except in unusual cases when the company had to employ outside aid for the benefit of a particular firm. By their laboratory studies the executives, and also the salesmen, became acquainted not only with sealing problems but also with other problems involved in making cans. This knowledge of their customers' production problems fitted the executives and salesmen to give advice and tended to inspire confidence on the part of users. Furthermore, it was the company's policy to put order-taking in the background and to put foremost its willingness and capacity to give technical aid. The response of many manufacturers was to purchase from the Charland Chemical Company instead of from other sealing compound producers whose salesmen were not so well informed about the can manufacturing business.

Late in 1919 the Charland Chemical Company started making Charlo liquid flux, or soldering fluid, which was a concentrated liquid base especially designed for making up, by a simple dilution with water, the various fluxing solutions used by can manufacturers. Charlo flux was first sold at a price about 1 cent a pound, or from 15% to 20%, above the price of competing products. Later, when production reached a larger volume, the company reduced the price so that it exceeded competitors' prices by only from 5% to 8%. This new line was introduced because the company was desirous of supplying can manufacturers with both of their main chemical compound requirements. The new line also decreased the unit cost of sales. By 1926 the company had extended its flux sales to the automobile radiator market, which was then taking about 50% of its output.

A line of Charlo labeling adhesives was introduced in 1921 to be sold to the canners themselves. Although there were perhaps 100 companies manufacturing adhesives, many of which were competing for the labeling trade, the Charland Chemical Company thought it wise to add adhesives to its line. The company always had considered it important to maintain contact with

canners in order to study the results which its sealing compound and flux were giving in the finished cans. The adhesives provided a means of entry to canning firms and their sales bore the cost of maintaining contacts with those firms. Incidentally, its sales promotion of adhesives enabled the company to familiarize the canners with Charlo sealing compound and, in some cases, to induce canners to specify that product for their cans. Another important reason for adding the adhesive line was the company's desire to build up its reputation as a specialist in the canning industry. The fact that most of the labeling adhesives on the market were considered by the company to be inferior in quality also was an argument in favor of the addition of this line. There were over 1,000 potential purchasers of labeling adhesives in the canning trade.

Charlo adhesives were slightly more expensive than most competing lines, but the Charlo line was stated to be of exceptional quality. Labels usually were applied to the cans by machine, and a good glue was desirable in order that the machine might operate at its highest efficiency. With ordinary adhesives, labels not infrequently failed to stick. Charlo adhesives properly applied, it was claimed, seldom failed. In selling adhesives the chief task of the company's salesmen was to convince packers that the extra cost of Charlo adhesives was more than offset by the saving in overhead and the reduction of unsatisfactory work. Small packers were slower to appreciate this saving than were large users and consequently it was harder to sell to them. Technical advice was necessary in order to insure correct application of the glue.

As a method of sales promotion, the company sold its adhesives in 5-gallon metal containers instead of in 50-gallon barrels or in 1-gallon or 5-gallon wooden kegs as was customary. The metal container was more convenient to handle; it gave the product better protection against evaporation and deterioration; and it could be cleaned of every ounce of glue. To cover the cost of this improved container, the buyer, when purchasing in less-than-10-pail lots, was charged 1 cent a pound above the base price in barrel lots; the base price was usually about 6 cents a pound. On an order for 10 pails or more, the additional cost was ½ cent a pound. Most customers preferred the new container.

In addition to the flux and adhesives, the company by 1927 had added shoe cements and soda lime to its line.

Mr. Cook believed that for the company's main lines the best method of distribution ordinarily was direct sale to can manufacturers and packers. He thought that service was the keynote in selling these products and that service could be performed much more satisfactorily by his own sales representatives than by agents or dealers. Direct selling also served to keep the company in touch with problems and developments among the users of its products. In 1927, sales of the company's three main lines, therefore, were being made directly with but three exceptions. A distributor, located at Seattle, was used in the Pacific Northwest for selling sealing compound, flux, and adhesives. Alhesives in the Baltimore territory were sold through a distributor. And flux in the Detroit territory was handled by an agent. Nine salesmen traveled from the factory selling sealing compound and flux primarily and adhesives incidentally; an additional salesman made adhesives his chief business. All the salesmen were technically trained college men who had spent several months in the factory and laboratory before going into the field. They were carefully instructed to put service first. Order-taking was so incidental that only 1% of the orders received came through salesmen.

The company sold through a distributor in Seattle for three reasons: first, the distributor gave the company a large cash order during the depression period of 1921, when the company was hard pressed financially; second, freight rates to the Pacific Coast made competition with local producers difficult in that region; third, several Pacific coast buyers who did business in Alaska needed quick deliveries to meet ship sailings. The distributor had a good name among his customers and was able, therefore, to make a large volume of sales for the Charland Chemical Company. The distributor paid cash for his purchases, did the billing and collecting, and carried stocks; the discount allowed the distributor was 10%. The Charland Chemical Company sent its own salesmen to the Pacific Northwest from time to time in order to maintain contact with, and to give service to, the can manufacturing companies located there.

The Baltimore territory, for adhesives alone, was granted in 1922 to a firm which appeared to have exceptional goodwill among can manufacturers and canners. Although the volume of sales obtained in that territory proved to be fairly satisfactory, the

distributor did not have the technical knowledge necessary for pushing the sales of adhesives. A large proportion of the distributor's sales of this line resulted from the efforts of the Charland Chemical Company's own salesmen.

The agent in Detroit, who handled flux, carried noncompeting products of other manufacturers, as did the two distributors to whom the company sold, but, in the case of the agent, the Charlo product was the main line. Mr. Cook considered the agency necessary in Detroit in order to give quick delivery service. Other flux manufacturers selling to the automobile radiator trade had local agents and local stocks in that city. The agent sold in the name of the Charland Chemical Company and was granted a commission of 10%. He was successful in selling flux to automobile radiator manufacturers. Those firms, in fact, bought practically all the Charlo flux that was sold in the Detroit district. The agent's efforts were supplemented by one of the company's flux experts who made about a half-dozen trips to Detroit each year. The company was able to meet the competition of lower-priced fluxes through its ability to render valuable technical assistance to customers.

In the summer of 1925 the Detroit agent asked for the company's adhesive line. He did not know the adhesive business, but felt that he would be able to make satisfactory contacts with the packers, who constituted the main market for adhesives. The company had not developed the market for adhesives in this territory. There were not enough can manufacturing companies there to warrant regular solicitation of orders for sealing compound, and the packers bought adhesives in quantities too small to justify sending a salesman to that territory for adhesives alone. Packers usually purchased adhesives in quantities of from 5 gallons to 50 gallons. Furthermore, freight charges put the company at a disadvantage as compared with local manufacturers. Freight to Detroit on less-than-carload lots was about 75 cents a pound and on carload lots about 35 cents a pound. The price of Charlo adhesives therefore averaged about 1 cent a pound more than the price of locally produced glues.

There was a further competitive disadvantage which existed in all places where the company had to compete with local manufacturers. Adhesives were spoiled by freezing, which meant that in at least four months of the year there was serious danger

of loss from adverse weather conditions, especially when shipments had to be in transit several days. To meet this difficulty the company had urged its customers, with fair success, to order their winter requirements in the fall; in order to encourage early orders the company offered post-datings as of January 1.

The company decided to grant the request of the Detroit agent to handle adhesives. After a year, however, the agency was discontinued. The sales manager attributed the failure to two causes—the high delivered price and the agent's lack of technical knowledge of the application of adhesives.

The Charland Chemical Company manufactured shoe cements under an exclusive long-term contract for a firm which sold supplies to shoe manufacturers. This firm was well and favorably known to companies purchasing shoe cements. Its sales efforts were supplemented by a salesman from the Charland Chemical Company who was an expert in the shoe cement line and in its use by the shoe industry.

The company sold its soda lime to dealers and also directly to large users. In 1926 the direct sales of the lime amounted to $2,000, or 20% of the company's sales of that product. The company employed no salesmen for selling its lime; patronage was secured by advertising in three or four medical journals. The soda lime was a nondeliquescent substance used for the absorption of acid gases; it was patented and was known as Wright's soda lime, so called after the man who was chiefly responsible for its development. Soda lime was used extensively by the medical profession for certain testing purposes. Its next most important use was in experimental and testing laboratories of industrial companies. It was used, for example, in the determination of the carbon content of steel. It was also used in the manufacture of industrial gas masks because of its power to absorb poisonous acid gases. The company sold soda lime directly to hospitals or other users in 40-pound lots or more. Frequently, the company received orders for less than 40 pounds but invariably it referred customers tendering such orders to a dealer. Dealers received discounts which varied according to the grade; the discounts were thought by the manufacturer to be unusually liberal. There had been no complaints of the fact that the Charland Chemical Company sold directly to large users. The reason, according to Mr. Cook, was that no dealer "had the face to complain of the

Charland Chemical Company's competition when he had such a wide margin." Furthermore, the dealers appreciated the fact that the company adhered to a one-price policy.

In the fall of 1927 the company considered the advisability of selling all its output of soda lime directly to users. Such a course would involve packaging the soda lime in small lots of 1, 2, and 10 pounds. It was estimated that these packages could be sold at prices which would yield a gross margin of about 30% after allowance for manufacturing profit. Because of the high quality of Wright soda lime, there was only one other soda lime which offered serious competition. Wright soda lime, however, apparently was generally preferred by the medical profession, which constituted by far the most important market. The competing firm packaged soda lime in small quantities and sold that item with other laboratory supplies which it manufactured.

Early in 1928 the Charland Chemical Company decided to discontinue practically all personal selling for its adhesives and thereafter to solicit orders for that product by mail. The executives were of the opinion that the reputation and goodwill which had been built up for the adhesives would enable the company to retain its present customers and gradually to obtain new ones through intelligently conducted mail solicitation. The personal contacts with canners which sale of adhesives had facilitated no longer were deemed so essential in providing the company with information as to the results of its sealing compound and flux, since those products had become firmly established.

COMMENTARY: The Charland Chemical Company within a period of eight years had encountered a wide variety of marketing problems including those of technical sales service, segregation of sales organization, employment of manufacturers' agents, distribution through dealers, advertising to professional men, contract sale to a single large customer, and the merchandising of new lines. Not all these problems had been handled with the acumen shown in developing the market for the sealing fluid and flux; the company started on a small scale and it was not within the range of human probabilities that a single company of this size could cope in masterly fashion with such a series of problems within such a short period of years.

The complexities of the company's problems arose out of the course which the company followed in diversifying its products. Diversification was desirable in order to secure stability of operations and essential in order to increase the volume of sales. The nucleus of the

business was the sealing compound, the sales of which were built up by the use of sales methods that were based upon intimate acquaintance with the needs of the potential customers. Since there were only about 50 potential users of this product, some of which were large companies, the technical sales problems could be handled effectively with a small sales crew.

When the company added the flux to its line, it was following a consistent course; for a large market for flux existed among the customers to which the sealing compound was sold and the two products presented analogous technical problems from the sales standpoint. When the company undertook to sell the flux to automobile manufacturers it was entering a somewhat different market, but one to which its previous sales methods could readily be applied. The employment of an agent in Detroit to carry stocks from which prompt deliveries could be made was a necessary supplement to the plan followed in selling the sealing compound and flux to can manufacturers. The success of the company in the Detroit market was indicated by the fact that in 1926 50% of the company's sales of flux were to automobile radiator manufacturers.

The decision to engage in the production of adhesives was questionable from the marketing standpoint. The market for adhesives was made up of a group of users entirely distinct from the groups to which the other products of the company were sold. For adhesives there were about 1,000 potential purchasers in the canning industry, many of them small, and with a highly seasonal business. Catering to these 1,000 canners there were somewhat less than 100 manufacturers of adhesives. There is no evidence that the Charland Chemical Company was warranted in entering into that competitive situation. Although through the contacts with canners, which its sale of adhesives afforded, the company might secure useful information relating to the utilization of its compound and flux, and perhaps was able to do a little missionary work for those lines, these advantages in themselves scarcely were sufficient to justify the addition of the new line.

The adhesives, furthermore, apparently were not suited to the type of selling methods that the company had used in building up its business in sealing compound and flux. To sell sealing compound and flux to 50 can manufacturers the company had 9 salesmen. To sell adhesives to 1,000 canners the company had an agent, a distributor who specialized on that market, and, until 1928, one salesman. The 9 salesmen selling sealing compound and flux and the flux agent in Detroit gave some incidental attention to the sale of adhesives. Then, in 1928, the company discontinued personal selling for the adhesives.

When the company added shoe cement to its line, it entered another entirely different market with a wholly new set of technical selling

problems. By selling its entire output of shoe cement to a single customer, the company placed itself in a less independent position than it held in marketing its other products. The company engaged in the manufacture of shoe cement under very special conditions which temporarily were advantageous. Such a concentration of sales, however, often proves to be disadvantageous in the long run.

Soda lime, the last product added, had a still different market which called for methods of distribution and sales promotion unlike those which the company had employed for marketing any of its other products.

The experience of this company illustrates the utilization of technical sales service by a small manufacturer in gaining a foothold in a competitive market. The company's merchandising procedure also was worth noting. Diversification of products was desirable, and when flux was added to the first product, a consistent marketing program could be adhered to. Shoe cements also permitted, potentially, the maintenance of a consistent program. In adding adhesives and soda lime, however, the company was entering upon fields with marketing problems so different from those of its other products that the wisdom of its course was questionable.

December, 1927 M. T. C.

Westmacott Machinery Company[1]

MANUFACTURER—POLISHING MACHINERY

Merchandising—*Addition of Supplies to Line of Machinery Manufacturer.* The company, which manufactured machinery for polishing floors, walls, and monuments of marble, granite, and other kinds of stone, occasionally received orders for abrasive materials and other supplies for use with the machinery sold to manufacturers of monuments. The company decided to carry stocks of such supplies for sale directly to users and to mention this fact in its advertising. Since, in the following five years, the company received few orders for such supplies and since most of these orders were small, it decided to discontinue selling the supplies.

(1920-1925)

Although the Westmacott Machinery Company did not carry abrasive materials and other supplies for use with the polishing machinery that it produced for sale to manufacturers of monuments, it occasionally received orders for such supplies from users of its machines. These orders, in 1920, suggested to the company the possibility of adding such supplies to its line.

Sales of polishing machinery for use by manufacturers of monuments constituted only about 20% of the company's total sales. The remaining sales were of machines for rubbing and polishing floors, walls, and wall bases made of marble, granite, terrazzo, tile, or cast stone.

The Westmacott Machinery Company maintained no sales force and depended for orders upon the catalog which it sent to customers and prospective customers and upon its advertising in trade papers. Prices of the company's machines ranged from $225 each to $450 each.

The market for the floor and wall polishing machines was among contractors in charge of the marble and other hard-surface construction work in new buildings. About 90% of the company's sales of floor and wall polishing machines were made directly to the contractors, and about 10% were made to contractors' supply firms. The bulk of the company's sales of these machines was to large contractors who operated half a dozen or more of each of the various types. In some instances the company

[1] Fictitious name.

rented machines to small contractors or to large contractors who temporarily needed additional machines.

In connection with the company's floor and wall polishing machines it was necessary to use especially prepared stones of carborundum, an extremely hard material which, when rubbed over floor or wall surfaces, smoothed and polished them. The company held a patent on the carborundum stones for use with its machines, and had those stones made to order for it. No other carborundum stones and no other abrasive material could be used with Westmacott machines, and it was necessary for all users to get supplies of carborundum stones directly from the company. A set of the stones, sufficient for polishing approximately 1,000 square feet of floor surface, cost $4.25. Single orders for the stones varied from $4.25 to $1,000.

About half the company's sales of machinery for rubbing and polishing monuments were made directly to firms manufacturing monuments, and about half were made through supply firms for the monument industry. These supply firms bought the machines outright, but, in most instances, shipments were made to users directly from the company's plant. There were a large number of firms manufacturing monuments. As a rule those firms were small, had little capital, and bought from hand to mouth. Most of them were located in marble and granite centers. Supply firms for this industry were conveniently located, and they customarily maintained sales forces for calling upon customers.

Among the supplies sold by the supply firms were crushed steel, the abrasive material commonly used in polishing monuments, putty powder, oxalic acid, and buffer felt, all of which were used in connection with the polishing process. These materials were standard and were used with Westmacott machines as well as with other polishing machines. For some of the polishing work, however, carborundum stones were used as an abrasive rather than crushed steel, and carborundum stones for Westmacott monument machines, as in the case of Westmacott floor and wall polishers, were patented and could be obtained only from the company.

If the company decided to carry supplies for its monument machines, it would buy them in large quantities from manufacturers or manufacturers' agents and resell directly to the users of the

machines. The company investigated and learned that it could buy crushed steel at a discount of 15% from the customary price to users. Handling and other expenses involved in selling the item were expected to amount to about 8% of sales. Approximately the same percentages would apply to the putty powder and other supplies that the company contemplated selling. A single polishing machine, the company figured, if operated regularly would require in the course of a year about $25 worth of these supplies.

The Westmacott Machinery Company decided to carry stocks of crushed steel and of the other supplies for sale directly to users of its machinery. In its advertising the company stated that such supplies could be obtained from it.

During the five years following this decision, the company received few orders for supplies, and most of the orders which it did receive were in small quantities. A monument manufacturer who needed $25 or $50 worth of supplies in the course of a year would place perhaps a dozen orders. The company, therefore, decided to discontinue all efforts to sell supplies, other than patented carborundum stones, for its monument machinery.

COMMENTARY: The outcome of the company's experiment was what should have been expected. The company had no especial reason to offer as to why monument manufacturers should buy supplies from it. The same sort of supplies could be obtained from supply firms, which generally were located favorably for making deliveries. The company, furthermore, employed no traveling salesmen to solicit orders for supplies and thereby impress upon the monument manufacturers the fact that the company was dealing in supplies. The machines and the carborundum stones which the company advertised had characteristics which commanded attention from prospective users. Not so the supplies.

This case, like the Intervale Supply Company's case,[2] shows that a manufacturing company usually cannot handle successfully a jobbing business in supplies.

October, 1927 M. T. C.

[2] See Intervale Supply Company, 3 H.B.R. 26.

Waverly Manufacturing Company[1]

MANUFACTURER—BENCH GRINDERS

Distribution Channels—*Selection for Product Added to Line.* The company, a manufacturer of high-priced installation machinery, undertook to have a comparatively inexpensive bench grinder which it developed sold by the same agents which sold the installations. This plan was unsatisfactory. The company considered: granting exclusive agencies for the grinders to supply firms; selling to supply firms without exclusive agencies; selecting suitable manufacturers' agents to sell the grinders.

(1927)

In 1924 the Waverly Manufacturing Company had begun to market a bench grinder which it had developed some years previously for use in its own shops. For marketing this comparatively inexpensive machine, the company had used chiefly the same agents that it used for the high-priced machines of installation type in which it specialized. In 1927 sales and production of the grinders were well balanced, but the company's plant facilities would allow a substantial increase in production. The company concluded, therefore, that if it was to develop the market adequately and make full use of its plant, it would have to revise its marketing program.

The bench grinder was made in portable or stationary models of two sizes, known as the "Little Hustler" and the "Big Hustler," which sold for $12 5 and $2 50, respectively. The company's terms for the machines were 30 days net, f.o.b. New York, unless the weak credit standing of a purchaser necessitated advance payment. There were seven other companies in the United States manufacturing bench grinders which the company considered as competitors of the Hustlers. Prices of these competing machines ranged from $70 to $180. Accessory tools for use with the Hustlers also were sold by the company, either individually or in sets. A complete set was priced at $125 and included burrs, grinding wheels, flexible polishers, sanding drums, flexible wheels, cones, abrasive sticks, and wire brushes. Tools made for other bench grinders could be used on the Hustlers, but the tools espe-

[1] Fictitious name.

cially designed for those machines were superior for that purpose.

A bench grinder is a machine consisting essentially of a small fractional horse power electric motor, driving a long flexible shaft to the end of which is attached the grinding tool. Several special features made the Hustlers superior in certain respects to competing grinders. One of these features was the yoke on which were mounted the electric motor and the flexible shaft. The yoke was so arranged as to permit the motor and the shaft head automatically to move up or down or to either side as the operator changed the position of the tool he was using, thus freeing the operator from the necessity of readjusting the machine when he changed the position of the cutting piece. The handpiece which the operator held and into which the tools were fitted, moreover, was especially designed and fitted with ball bearings so that it did not become heated. The shaft was belt driven by the motor, and the pulleys were designed so that four speeds were obtainable. A convenient belt-adjusting device permitted the operator to change quickly the shaft speed. A high-speed handpiece, not found on competing machines, was provided also. The special features were in part protected by patents.

The Hustlers could be used in practically all industries requiring operations which involved the grinding, drilling, or polishing of metals. They were especially useful in finishing castings which were too heavy to be brought to stationary grinders. The machines also could be used for polishing marble or porcelain and could be adapted for use in wood-working shops, although that had not as yet been done. The versatility of the machines is illustrated by the fact that a large fish canning company used one of them with an attachment for scaling fish.

When, in 1924, the Waverly Manufacturing Company had decided to market the Hustlers, it had induced the manufacturers' agents who sold its heavy installation machines to sell the grinding machines also. There were five of these agents in the United States, with offices so located that their territories practically were noncompeting. One agent had offices in Detroit, Pittsburgh, Chicago, and Cleveland; another had offices in St. Louis and Cincinnati; and the three others had offices in Birmingham, Boston, and Buffalo, respectively. Three of the agents had exclusive territories for the Waverly installations; the company did not grant exclusive territories to the Boston and Buffalo distributors, how-

ever, inasmuch as it sold many machines directly to manufacturers in New York and the New England states. The agents, in addition to the Waverly machines, sold heavy milling machinery, planing machinery, and die-cutting machinery of other manu-

EXHIBIT 1

SPACE ADVERTISING OF THE WAVERLY MANUFACTURING COMPANY IN 1926

PUBLICATION	AMOUNT OF SPACE		COST	
	Hustler Advertising	General Advertising	Hustler Advertising	General Advertising
American Machine Tool Record	¼ page monthly.	.....	$202.56	.....
American Machinist	1/16 and 5/16 page alternating every 4 weeks.	1 page January. 1/30 page twice monthly.	325.00	$175.00
Machinery	1/16 page January and December.	1/16 page monthly except January and December.	21.50	107.50
Forging, Stamping and Heat Treating	⅛ page every other month.	⅞ page every other month.	27.50	192.50
A. S. M. E. Yearly Catalog	1/20 page.	19/20 page.	8.50	161.50
Buyer's Register	1/12 page monthly.	.....	104.50	.....
Thomas' Register	7½ inches.	7½ inches.	125.00	125.00
Iron Age	.....	1 page January.	.....	125.00
Total	.....	.....	$814.56	$886.50

facturers. The agents' sales were made chiefly to manufacturers of machinery, automobiles, railroad equipment, and electrical equipment. Each sale involved a large sum and was preceded by a relatively long period of negotiation between the agent's salesman and the executives of the purchasing firm. The Waverly installations, for example, sold for from $12,000 to $30,000. All shipments of these machines were made directly from the company's factory to the customers. Production often was not started until orders had been received. The agents received a commission of 10% of the selling price for selling the large Waverly machines.

Each year since it had begun to market the grinders, the company had advertised them in the publications which it judged were regarded as buyers' guides for this type of machinery. The company, however, was prepared to expand its advertising and sales promotional program if that were deemed advisable. Exhibit 1

summarizes the company's 1926 space advertising of Hustlers and of its products in general. Some inquiries had resulted from this advertising.

Sometimes the Hustlers were advertised alone and sometimes they were pictured with the company's heavy installations. A typical combination advertisement had the headline "Equipment for the Modern Drop Forge Plant," and showed three pictures: a die room in the Humphrey Electrical Works where Hustlers were in use; the Hustler, beneath which were the words "Efficient plants have found a thousand uses for Hustlers"; and a Waverly installation as used in the Humphrey Electrical Works. Typical advertisements devoted exclusively to Hustlers showed pictures of the machines and contained copy such as:

HUSTLER BENCH GRINDER

Has distinctive features of superiority. Automatic adjustment to position. Speed range 850—11,000 R.P.M. Power—Flexibility —Control. Equipped for die sinking, toolmaking, polishing, milling, drilling, and snagging. New uses being found daily.

WAVERLY MANUFACTURING COMPANY, NEW YORK CITY

A *wheel speed* of 10,500 R.P.M., the shaft running at 3,500 R.P.M. Just one of the many distinctive features of the Hustler Bench Grinder—the machine which has made such a remarkable success everywhere.

Write for Particulars

WAVERLY MANUFACTURING COMPANY, NEW YORK CITY

In addition to its periodical advertising, the company occasionally sent circulars to a mailing list obtained from buyers' guides such as *Hendrick's Commercial Register* and *Thomas' Register.* The company also occasionally supplied agents with literature for mailing to their customers.

In 1926 the company gave demonstrations of its machinery and distributed circulars at the following machinery shows and conventions: Atlantic City, Railway Manufacturers' Supply Association; New Haven, Machine Tool Exhibit; Chicago, National Machinery Tool Exposition; Detroit, American Foundrymen's Association; New York, National Exposition of Power and Mechanical Engineers. These exhibitions, in the company's opinion, were the most effective means of interesting prospective buyers.

The cost to the company for exhibiting the grinding machines in 1926 was $1,650.

Manufacturers of competing bench grinders sold in various ways. Those large companies which produced many small machines that could be used in several industries generally had branch offices in the leading industrial centers. Their salesmen, operating from the branch offices, sold directly to users. Some small competitors sold through supply firms; others sold through manufacturers' agents for small machinery, such as air compressors, small pneumatic tools, and pipe-bending machinery. These agents had exclusive territories and sold usually on a commission basis to the users. Occasionally they sold also to supply firms. Sales by supply firms were reported usually to be small because the supply firms' salesmen did not have the technical knowledge necessary to advise concerning the proper machine for a particular job, or because salesmen were reluctant to devote considerable time to demonstrating a single product of a large line.

The advertising of competitors followed two general practices. Some companies used technical copy like that written for the Hustlers; others preferred less technical copy like that of a company which stressed the idea of a "rotary file." The following examples are of nontechnical copy which appeared in the advertising by two competitors. The illustrations used in the advertisements showed either the particular bench grinder which was being advertised or a workman using the machine for some special work. The advertisements occupied respectively one-fourth and one-half pages in the industrial papers in which they appeared.

For Light Assembling—

Drilling, Reaming, Polishing,

Tool and Die Making—USE ECONOMY FLEXIBLE SHAFT DRIVEN TOOLS

In dozens of shops, on hundreds of jobs, these portable motor-driven tools are effecting vital economies.

Slow, cumbersome, costly, hand finish is accomplished in a fraction of the time by the aid of the flexible shaft.

Look about your shop now—there are many operations that can be performed to better advantage and with greater profits.

May we show you the way in our 36-page catalog?

Gladly sent upon request.

ECONOMY FLEXIBLE SHAFT COMPANY

HANDY AS A HAMMER—AND AS NECESSARY

No metal working plant would deign to "get along" without some kind of a hammer. Yet hundreds of them are doing without as basically necessary an equipment because they do not "know of their own knowledge" what it will do for them. Consequently they continue to sacrifice many valuable hours to methods which are becoming obsolete through the high developments of Excelso Flexible Equipments and Special Tools.

Just as there is a "right kind of hammer" for each particular job, so there is a right type of Excelso Equipment for any one of the dozens of different kinds of work in your plant—where they will reduce operation costs from at least 10% to 50% and more. And they will produce better work than you are now acquiring with the now more expensive methods.

Power sizes range from ⅛ to 1 horse power. Built in convenient forms that meet every physical plant requirement—such as Bench, Pedestal, Suspended, Caster Base, and Floor Truck Type. Direct and counter shaft drives. For Grinding, Filing, Scraping, Metal Pattern Making, Die Sinking and Sharpening, Buffing and Polishing.

Advise of your main classes of work.
We will recommend the proper equipment.
A demonstration in your plant will prove
their many economical features.

EXCELSO EQUIPMENT COMPANY

A sales manager with headquarters at the company's New York office devoted his time exclusively to Hustlers. He visited the five agents from time to time to assist them in selling Hustlers. Exclusive agencies for the Hustlers had not been granted the five agents, and the company made some sales through mill supply firms and directly to users. Five men employed by the company to demonstrate its installation machinery also attempted to sell Hustlers. On sales of Hustlers they received a commission of 15%, as also did the five agents for the heavy machines, to whom the company shipped Hustlers on consignment. Those agents were expected to purchase outright stocks of accessory tools for the machines.

Users ordinarily ordered only one or two Hustlers at a time, although large manufacturers sometimes purchased in greater quantities. Sales of Hustlers, including commissions, were $60,500 in 1924, $76,600 in 1925, and $112,000 in 1926. The gross margin was approximately 56% of the selling price. The cost figures on which this gross margin was calculated included a portion of the factory overhead but did not include any selling

or administrative expense of the Waverly Manufacturing Company. In 1926 the company made 70% of its sales of Hustlers through the five agents for its heavy machinery and 30% to supply firms or directly to users.

The mill supply firms, through which Hustlers were sold occasionally, might be described as distributors of products to industrial users. They stocked a large variety of articles for which there was a wide demand, such as general factory supplies, hardware, belting, standard fittings, small tools such as files and hammers, and small accessory machinery such as electric drills and small lathes. Some of the supply firms had exclusive territories for certain small machines; in many instances they did not carry stocks of the machines, but, after receiving an order, obtained the necessary machines from the manufacturer's branch or representative with stocks. The supply firms published catalogs to facilitate mail orders and employed salesmen to call on mills, manufacturers, and machine shops. Occasionally, a mill supply firm specialized in supplies suitable for a specific industry; generally, however, these firms sold to any type of industry which had use for the merchandise which they stocked.

In 1927 the company recognized that with its existing method of selling the grinders it was not developing the market adequately. The five agents for the large Waverly machines reached comparatively few of the potential customers for the grinders. None of them attempted systematically to cover the market for grinders. Small machine shops and many industries, such as furniture manufacturing and stone cutting, were not visited by the agents' salesmen, since their primary interest was in the installation machinery. The small amount which a salesman received for selling a Hustler, as compared with a heavy installation machine, also tended to lead to neglect of the grinders. The company knew of one instance in which a prospective customer who visited one of the agents for a demonstration of the Hustler was forced to wait two hours before the agent could locate the machine in the warehouse. Salesmen who were accustomed to selling high-priced installation machinery, moreover, found difficulty in selling the inexpensive machines. Whereas in selling the installations it was necessary to see the executives of the purchasing company, in selling the Hustlers the foremen or superintendents had to be interviewed. Some dissatisfaction on the part of the agents' sales-

men also had arisen from the fact that, after they had introduced the Hustlers to a prospective customer, that customer sometimes bought the machine from the supply firm from which he customarily obtained his supplies and small accessory machinery. The five agents, moreover, had shown some unwillingness to purchase sufficient stocks of accessory tools for the Hustlers to provide prompt service in replacing worn-out tools. This service the company deemed essential to a successful marketing plan.

In 1927 the executives of the Waverly Manufacturing Company were undecided as to the advisability of granting exclusive agencies for Hustlers and also, although the company was in a strong financial position, as to the credit policy to follow. Sales of Hustlers, in the company's opinion, could not be expected to be sufficient to support sales branches or salesmen exclusively for those machines. In judging the merits of other plans of distribution, the company considered the adequacy with which each could be expected to cover the potential market; the probable aggressiveness of the selling under each; the investment required in inventories; and the ease with which users would be able to secure accessory tools for replacement.

Three possibilities were under consideration:

1. Exclusive territorial agencies might be granted to a large number of supply firms, which would either purchase stocks of the machines for resale, or sell on a commission basis.

2. Numerous supply firms might be selected as distributors without exclusive territorial rights. It was thought that it would be necessary to sell on a commission basis under this arrangement.

3. Exclusive agency arrangements might be made with manufacturers' agents selling similar, noncompeting machinery, such as air compressors and small pneumatic tools. The manufacturers' agents could either buy the machines outright for resale or sell on a commission basis.

COMMENTARY: The Waverly Manufacturing Company could not expect a satisfactory marketing of its Hustler grinding machines through the manufacturers' agents who were selling its installation equipment. It was not to be expected that those agents would cover the market aggressively for this small equipment, which was so far out of line with their usual interests. The grinders were sold to a different class of prospects from those buying the installation machinery and required a different type of selling effort. Direct sale by the company

apparently was not the answer either, because of the expense of adequate coverage of the market for so small a unit. Even in the territories where the company was selling the installation equipment directly to users, the regular salesmen were not likely to handle the new product effectively, for the same reasons that made the agents ineffective for that line. Although mill supply firms might have been used, inasmuch as many of them handled accessory equipment of similar type, reached the market for such a product regularly, and were logical organizations to carry adequate supplies of tools for the machines, nevertheless they were not entirely suitable. A machinery supply firm carries a large number of products. Accordingly, it cannot give aggressive selling effort to a single product. The bench grinders, being relatively new on the market and having distinctive appeals, required aggressive selling.

It would seem that the best answer to the problem of selling the grinders lay in use of manufacturers' agents carrying allied accessory equipment sold to firms which were prospects also for the grinders. Such manufacturers' agents would have a limited number of items to sell and hence would have an interest in aggressive coverage of the market. They would have forces of salesmen so that the company might expect immediate coverage of the market. Moreover, they were in a position to deal with supply firms which might carry supplies of tools for the bench grinders in cases where the agents were not able adequately to cover their territories with their own organizations.

In its advertising the Waverly Manufacturing Company had a poor copy approach for the sale of its grinders. The advertising did not give performance facts which tended to establish in the minds of readers a need for the machines, nor did it present facts or ideas which made a strong appeal to selective buying motives for the product. Since the product possessed improved and individualized features, advertising offered a real opportunity, not only for stimulating among readers a want for the product, but also for presenting the advantages of the particular make of grinders. Adequately to present the Hustler machines called for the use of larger space than was used in 1926.

The company was of the opinion that machinery shows and conventions had been effective means of interesting prospective buyers. The conventions and shows had been valuable largely because the company was not covering the market systematically and was not making its product well known through advertising. The market fair or show ordinarily is of help primarily to the small seller who is not organized adequately to reach prospects who attend such shows. Were the company to develop a systematic sales coverage of the market and to make its advertising more effective, the need and value of the machinery convention would tend to decrease.

February, 1928 N. H. B.

National Rock Drill Company[1] (A)

MANUFACTURER—ROCK DRILLS

Distribution Channels—*Direct Sale Utilized in Preference to Manufacturers' Agents or Supply Firms.* The company, a manufacturer of rock drills for use in metal mines, decided to sell its products directly to users in that market, rather than to make use of manufacturers' agents or supply firms.

Distribution Channels—*Distributors Utilized in Preference to Direct Sale.* When the company, a manufacturer of rock drills which it sold directly to users in the mines market, adapted its mining tools for use in road and street construction and repair, it had to decide upon a method of distribution for the new market. The company decided to sell to selected contractors' equipment dealers rather than to sell directly to users.

(1922-1926)

The National Rock Drill Company, a subsidiary of a large pneumatic tool corporation located in Chicago, was organized in 1907 to manufacture rock drilling machines for use in metal ore mines. The subsidiary company at first distributed its products on a small scale by means of one salesman, who traveled in mining districts to sell directly to mining companies. The factory of the subsidiary company was separated from that of the main company in 1922, and the subsidiary company thereafter intensified its sales efforts by increasing its sales force for direct selling. In 1924, by a few changes in design, the company adapted its mining tools for use in rock quarries and in such work as pavement breaking and demolition of concrete structures. The company had to decide in 1924 what channels of distribution to adopt for its new line of construction tools.

The parent pneumatic tool corporation had organized the National Rock Drill Company primarily to avoid the prejudice of mining companies against the products of large manufacturers of pneumatic tools who made mining tools as a side line. The National Rock Drill Company specialized in mining tools and by 1922 had developed four types, each particularly suited to a certain class of work in metal ore mines. The company's line of rock drilling machines consisted of "drifters" weighing 125 pounds and

[1] Fictitious name. See also National Rock Drill Company (B), page 381.

selling for $365 each; "stopers" weighing from 75 to 100 pounds and selling for $185 each; "sinkers" weighing 41 pounds and selling for $175 each; and "augerjacks" selling for $170 each.

Prices quoted by the National Rock Drill Company did not vary much from prices for competing machines of similar types. The advantages over competing rock drills which the National Rock Drill Company claimed for its products were higher cutting speed, less vibration and consequently less fatigue to operators, greater ease of holding, and light weight yet durable construction which insured lower operating and repair expenses. These claims the company had substantiated by comparative tests with the principal competing drills under actual operating conditions. A drilling machine either could be mounted on a frame or held by an operator. Air was conveyed to the drill by an air hose from an air compressor. The air mechanism under control of the operator caused rapid, sharp, rotating blows to be struck on the drill, so that the drill penetrated and wore away the rock. The drill shanks and bits were detachable and, when worn, could be replaced by new ones.

From 1907 to 1922 sales of the National Rock Drill Company had been irregular, with a small over-all increase. Sales in 1922 amounted to about $180,000. At that time the company had one salesman stationed in Denver to cover the Colorado and Utah mines, and one salesman whom the company on occasion sent to any mining district in the United States.

The company chose to sell directly to the mining companies because its competitors were well established and it was judged that their competition could be met effectively only by means of personal salesmanship and demonstration, which mine supply firms or manufacturers' agents would fail to give. The National Rock Drill Company had five important competitors. When the company, in 1922, had secured a separate factory and had decided to develop the mines market more intensively than theretofore, it had contemplated distributing its products through supply firms or through manufacturers' agents, but had decided to continue to sell directly.

There were several mine supply firms in each mining district. Some of these firms acted as exclusive agents for competitors of the National Rock Drill Company. Others were available as distributors of the company's products either as exclusive agents

carrying stocks or on a commission basis with the drilling machines shipped on consignment. The supply firms stocked a wide range of mine supplies and frequently handled the products of several manufacturers of different types of mining machinery. The competitors of the National Rock Drill Company who distributed through mine supply firms employed missionary salesmen to visit mine superintendents and purchasing agents in order to interest them through personal salesmanship and demonstration. The supply firms stocked repair parts and new drill shanks and bits for replacements.

Manufacturers' agents were available who would sell the National drilling machines on a 15% or 20% commission basis. Such agents did not carry stocks and usually sold two or more noncompeting types of mining equipment and machinery. They usually represented, however, only manufacturers of heavy equipment or machinery which required installation service and technical advice. The companies they represented frequently were those whose potential sales in any one mining district were not large enough to warrant the maintenance of direct-selling organizations. When negotiations were under way for a large order or installation, the manufacturer commonly sent a field engineer to assist the agent in completing the sale.

Through the experience of its two salesmen, the National Rock Drill Company had learned that mine superintendents and engineers were the key factors in making sales of drilling machines. The superintendents and engineers specified the makes of machines which they desired to have used in the mines, and the purchasing agents for the mines bought the machines specified. To convince a mine superintendent of the merits of a machine, it was necessary for a salesman familiar with mining technique to visit the mine superintendent underground and demonstrate the machine under actual working conditions. Mine purchasing agents, it had been learned, preferred to purchase such equipment as rock drills directly from the manufacturing company rather than through agents or supply firms.

Mining companies maintained their own repair shops and carried stocks of repair parts and replacement parts. They kept the tools in good working order and had a large reserve of tools above ground to send below without delay when breaks occurred. One mine, for example, had 150 drilling machines. Of these, 50 nor-

mally were working below ground at any one time, and 100 were in reserve or in the repair shop. The company's salesmen reported also that local pride in the various mining districts was so strong as to place at a disadvantage a salesman with headquarters at Chicago or some other place outside the locality in which he was soliciting orders. Local pride, as well as natural barriers, also made it difficult for a manufacturing agent or supply firm located in one mining district, such as Denver, to sell in another mining district, such as Salt Lake City.

After the company had decided to continue to sell directly to mining companies, it began to expand its sales force, so that by 1924 it had 10 salesmen selling to about 300 mining companies. Each salesman had a territory determined by the location of the mining centers, the natural barriers, and the "local pride" divisions. The salesmen chosen were men with mining experience who, in many instances, were acquainted personally with mine executives in their territories. They established resident headquarters in their respective territories; each salesman usually had an office or shared part of a display room with some noncompeting company. Each salesman received a salary of $250 a month, and the company paid his traveling and office expenses, amounting on an average to $300 a month per salesman. A salesman received a bonus of 2% of his salary if his sales in any accounting period exceeded five times his direct sales expenses, and a bonus of 3% if his sales amounted to more than six times his direct sales expenses. Sales had increased to $230,000 in 1923 and to $336,000 in 1924.

During 1924 the National Rock Drill Company, by means of a few changes in design, developed from its original line of mining tools a line of tools for use in rock quarries and in such construction work as pavement breaking, excavation in rock formations, and demolition of concrete structures. The company's rock drilling machines for use in construction work sold for from $170 to $175. The paving breakers sold for $175 to $195, and a hand-operated pneumatic spade for digging clay sold for from $80 to $100.

By trying out its new line of tools among local Chicago road builders and construction contractors in 1924, the National Rock Drill Company satisfied itself that its tools could accomplish more work in a given period of time, with less air consumption,

less repair and replacement cost, and less fatigue to operators, than could any competing tools.

The executives of the company had had no experience in selling to the class of persons who represented the potential market for its new line. Rock quarries constituted a minor part of the potential market. They were not concentrated geographically or in large purchasing units as were the mines. The major market for the new line of tools was among construction contractors, particularly those engaged in road and street construction and repair. Municipalities whose street departments did street construction or repair work instead of letting such work out to contractors also were potential purchasers. The market for the new line of tools, therefore, was national in extent, and the number of potential customers was large. The individual requirements of a majority of the contractors who were prospective purchasers of such tools as paving breakers were small, probably less than five breakers, and they ordinarily purchased one breaker at a time, whereas mines frequently ordered ten or more machines at a time.

By studying the technical and trade publications of the construction industries and by interviewing local contractors, dealers in contractors' supplies, and municipal officers, the company learned that contractors as a rule purchased their equipment and tools from contractors' equipment dealers. Frequently those dealers rented equipment to contractors. Contractors' equipment dealers either purchased equipment for resale or accepted equipment on consignment from manufacturers for sale to contractors. A contractors' equipment dealer sometimes acted as an exclusive agent for an equipment manufacturer. Often, however, such a dealer represented several competing or noncompeting manufacturers without any exclusive agency arrangements. A few of the equipment dealers also operated large construction companies. Because an equipment dealer, in order completely to supply the equipment needs of contractors, usually represented several manufacturers and lines of equipment, none of the manufacturers represented could expect the dealer to sell their particular lines aggressively.

Although the generally accepted method of distributing contractors' equipment was by means of the equipment dealers, a few companies manufacturing such equipment as steam shovels, concrete mixers, trucks, and air compressors had branch offices and

used salesmen to sell directly to contractors. The executives of the National Rock Drill Company, however, were of the opinion that for the new line the type of direct sales efforts which the company used in selling to mining companies would be more costly and less satisfactory than selling through equipment dealers. The company's service problem for the contracting line might become serious if direct selling were attempted. Contractors as a rule did not keep on hand a supply of repair parts, as did mining companies. Because of the rough type of work for which such machines as the company manufactured were used, and the necessarily delicate mechanism of the air control and application, the machines were frequently in need of repair. The company had observed that contractors took less care of their tools than the mining companies did and that the contractors' operators, taken from the ranks of unskilled labor, often continued to operate the machines after they were in need of repair. Although the machines were made so that the replacement of worn and broken parts was comparatively simple, the making of repairs was beyond the skill of the ordinary workman. Contractors relied, therefore, upon the supply firms and equipment dealers for immediate service in supplying parts and in providing repair service.

Since other manufacturers had been selling such contracting tools as paving breakers for several years, the National Rock Drill Company was at a disadvantage in selecting distributors. Most of the leading equipment dealers already were representing competitors of the National Rock Drill Company. The company was at a further disadvantage in that it did not manufacture moveable air compressors. Air compressors used in mines ordinarily were stationary, whereas for use in construction work air compressors were mounted on trucks to be taken from one job to another. Two of the company's leading competitors made moveable air compressors as well as pneumatic tool equipment. The National Rock Drill Company's tools could be attached by air hose to any make of compressor. The company, in 1924, in order to lessen the competitive disadvantage which it suffered through not making moveable air compressors, made selling arrangements with three companies which manufactured moveable air compressors but did not make air tools. Those companies sold to all industries using compressed air machinery. They sold to

contractors through equipment dealers. According to the arrangements, the three companies agreed to sell National paving breakers as standard equipment with their air compressors when a contractor wished to purchase a complete outfit. They would receive a small commission on the paving breakers which they sold as equipment for their compressors.

The pneumatic tool company of which the National Rock Drill Company was a subsidiary had branch sales offices in seven large cities in the United States. It manufactured and sold a varied line of pneumatic tools and air appliances, such as air hand drills, hammers, grinders, and riveters. The branch offices of that company could assist the National Rock Drill Company in securing and retaining equipment dealers for the new line of tools.

The National Rock Drill Company decided, in 1924, to distribute its line of contractors' tools through equipment dealers. By consulting trade directories and advertisements in trade papers, it secured the names of prospective dealers for its line. The company employed one salesman to visit some of those dealers and entered into correspondence with others. By 1926 the company had secured 70 dealers who agreed to represent the company and to carry stocks of machines and repair parts. No exclusive territories were granted. Part of the dealers purchased outright and the others accepted 90-day consignments and sold the machines on commission. The commission or trade discount was 20% for the drilling machines and 10% for repair parts. The dealers in most instances agreed not to sell competing lines of tools. It was a policy of the company to secure as many reliable dealers as possible. The company, however, attempted to select its dealers so that they would not be in direct competition with each other in any local territory. The company started a trade paper advertising campaign in 1924, using publications which circulated among construction contractors, others interested in building and road construction, and persons in the rock quarrying industry. The total sales of the company were $460,000 in 1925, of which about 30% was represented by the contractors' line. The sales in the first three months of 1926 were 30% above those for the corresponding period of 1925. In the mining line, sales of replacement parts in 1925 equaled sales of new machines. The company expected this condition to prevail for the contractors' line after that line had been on the market for two or three years.

COMMENTARY: This case affords an illustration of the possibilities of using different marketing methods for different types of markets. The company's market among mining companies was distinct from its market among contractors. With such a clear demarcation, the sales plans and the sales organizations for handling the two types of markets could be segregated.[2] The plan of selling directly to mining companies did not prevent or interfere with the operation of a plan of utilizing the services of dealers in selling to contractors.

In the sales to mining companies, the two major questions raised in this case were (1) whether to sell directly to the mining companies through salesmen or (2) indirectly through (*a*) supply firms or (*b*) manufacturers' agents.

Inasmuch as the mining companies carried ample reserve stocks of repair parts, the services of supply firms were not needed for that purpose. Since the practice of competitors indicated that it would have been necessary for the company to supplement the efforts of the supply firms by employing missionary salesmen, no economy was to have been expected by this company from utilizing the services of supply firms. The situation was one in which direct sale clearly was to be preferred over sale to supply firms.

The decision to utilize salesmen in preference to manufacturers' agents likewise was well grounded in this case. As in the case of the Stetlow-Carroll Company,[3] the National Rock Drill Company's market among mining companies was in concentrated territories, in each of which a salesman could secure a profitable volume of sales. Even though a manufacturers' agent might gain some advantage by calling on a prospective customer more frequently than the National Rock Drill Company's salesman was likely to call,[4] that advantage was largely or wholly offset by the preference of the mine superintendents and engineers for having direct relations with the manufacturer.

In marketing its products to contractors, the company faced a situation which was very different from that in the mining field. In the contractors' market, the number of potential customers was large. They were widely scattered. They could not be located readily. The individual orders were small. And the contractors did not carry reserve stocks of repair parts. It was true, to be sure, that the dealers in contractors' equipment and supplies sold numerous lines, with consequent diffusion of interest. That was an objection to selling to the dealers. Another objection to adopting the plan was the difficulty which a latecomer, such as the National Rock Drill Company, would experience in

[2] See case of Tinkham, Littell, Incorporated, 1 H.B.R. 352 and, for commentary, 2 H.B.R. 507; Nobel Chain Company, page 179; Glen Tool Company, page 44; Chalders Manufacturing Company, page 145; Paley Truck Company, page 252.

[3] Stetlow-Carroll Company, 3 H.B.R. 37.

[4] See Lane Equipment Company, 3 H.B.R. 34.

obtaining satisfactory representation in the field, where strong competitors had established relations with the foremost dealers. Despite these objections, it was better policy to undertake to develop the market through dealers than to attempt to sell directly to the contractors. The dealers could render essential services which the manufacturer could not render except at prohibitive cost. The company's policy of selecting dealers so as to avoid intensive competition between them was an essential feature of the program adopted.

January, 1927 M. T. C.

Queensbury Pump Company[1] (B)

MANUFACTURER—FRICTION CLUTCHES

Sales Organization—*Segregation by Lines of Products.* The company's main lines were power pumps and road machinery. Later, when it began to manufacture friction clutches, the company decided to develop a separate department for marketing them, rather than to market them by means of its existing sales organization. The markets for the two types of products were so dissimilar in nature, in the company's opinion, as to warrant this segregation of the sales organization.

Distribution Channels—*Distributors Utilized in Preference to Direct Sale.* The company sold its main lines, which were power pumps and road machinery, directly to users by means of its own salesmen. Later, when it began to manufacture friction clutches, the company decided to sell them through mill and factory supply firms, instead of directly, except in the case of sales to machinery manufacturers as fabricating parts.

Market Coverage—*Selected Distribution Utilized in Preference to Dense Distribution.* When it added friction clutches to its line, the company decided to sell them through selected supply firms. Selected distribution was preferred to intensive distribution chiefly because it was thought that under that plan distributors would devote more attention to the line.

(1927)

The Queensbury Pump Company manufactured road oiling and tarring equipment, street sweepers, power pumps, and friction clutches. All these products except the clutches were sold directly to users by salesmen operating from the company's central and branch offices. For its clutches, however, the company deemed a different method of distribution advisable.

The road oiling and tarring equipment and the street sweepers were purchased by municipalities and road contractors. Among the principal users of Queensbury power pumps were the petroleum industries, the shipbuilding industry, manufacturers of fuel oil equipment, manufacturers of roofing and floor coverings, paint and varnish manufacturers, the dye and chemical industries, sugar refineries, steel manufacturers, meat packers, soap manufacturers, and textile mills. Potential users of the clutches included practically all manufacturing plants. In addition, there

[1] Fictitious name. See also Queensbury Pump Company (A), page 37.

was a market among various manufacturers of machinery, conveyor manufacturers, for instance, who equipped their machines with clutches.

Queensbury friction clutches were used on line shafts and with belt, chain, and gear drives. By installation of these clutches at suitable locations on a line shaft the power could be disconnected from any section of the shaft almost instantly. This made it unnecessary to operate the machinery in all parts of a factory when only that in one part was needed and also, by making it possible for each section of the plant to disconnect its power at will, served as a protection against accidents. The clutches could be used on either the driving or receiving end of a belt, rope, gear, or chain drive. The company also made a clutch especially adapted for machinery connected directly to motors or gasoline engines. In most instances the clutches required pulleys to be used in connection with them. The Queensbury Pump Company, however, did not make any pulleys. Its clutches were designed to fit the standard pulleys of other manufacturers, especially those made by one large firm.

The Queensbury Pump Company had seven sales branches. Two of the branches were on the Pacific Coast; two were in the Middle West; one was in the South; and two were in the East. At each branch there was a manager who was active in selling, and several of the branches had one or two salesmen in addition. Six salesmen traveled from the central office. The branch managers were competent men and were allowed a large measure of freedom in directing sales activities in their own territories. Each branch manager and salesman sold the road oiling and tarring equipment, the street sweepers, and the power pumps. They did not, however, except in rare instances, solicit orders for the friction clutches.

With the exception of the clutches, all the company's products in general were sold at prices above those for competing products. The company was recognized as a manufacturer of high-grade equipment and its salesmen were trained to emphasize the performance of the products and their low operating and repair costs. Prices of Queensbury clutches were comparable to prices of competing equipment. Unit prices of the products other than the clutches were large, ranging from several hundred to several thousand dollars. Unit prices of the clutches, on the other hand, were

comparatively small. Prices of large sizes of clutches of certain models amounted to as much as $1,000 each, but prices of the type of clutches most commonly sold ranged from $13 each to $30 or $40.

The Queensbury Pump Company had begun the manufacture of friction clutches in 1915, when the demand for its other products had been slack and the factory was operating below capacity. At that time the company had manufactured the clutches at a flat rate for the men who held the patents. Those men had undertaken to market the clutches. Later, in 1917, the company had purchased the patent rights and had begun to market the clutches itself. The original owners of the patent rights had not been successful in developing a wide market and the company, when it acquired the rights, had a choice of marketing the clutches by means of its existing sales organization or of developing a new organization. The company chose the latter course.

Competition in clutches was keen. There were several large companies which specialized upon their manufacture. Although the executives of the Queensbury Pump Company were of the opinion that its clutches compared favorably with competing clutches, they did not intend to undertake to build up a large market for those items by aggressive sales methods. The clutches were to serve as a side line for utilizing factory capacity not required for the manufacture of the company's main lines. It was expected, however, that the clutches would show a fair profit.

The company was unwilling to undertake to sell the clutches directly to users as it did its other products. The number of potential users was large and their unit purchases in most instances would be comparatively small. Furthermore, Queensbury salesmen were high-grade men carefully trained in the technical aspects of the company's pumps and road equipment. The company decided, therefore, to distribute its clutches through mill and factory supply firms. It further decided to sell to only one supply firm, if possible the largest one, in each industrial area. This would mean only one distributor in some cities, but in others, where the demand was sufficient, several distributors might represent the company. The manufacturer for whose pulleys Queensbury clutches were especially adapted was, as a rule, represented by the most important supply firm in each city, and the Queensbury Pump Company in so far as possible secured those same

firms as its representatives. One of the chief reasons for using selected rather than dense distribution was the company's belief that many of the outstanding supply firms would be unwilling to devote sales effort to a line which also was sold by small firms in their territories.

The company employed a sales manager for the clutch department. He was responsible for securing distributors and for selling the clutches to them. The branch managers and salesmen for the other lines did not call upon the distributors or solicit orders for clutches from users except in unusual instances, when large orders were involved or when the sales manager for the clutches was unable to visit some outlying district where a personal contact was needed. Manufacturers purchasing clutches for resale with their machinery usually bought directly from the company rather than from the distributors, and these sales were handled by the sales manager for the clutch department.

In most instances the Queensbury Pump Company did not enter into an agreement with its distributors not to sell to competing supply firms in their territories, but it was understood that so long as a distributor devoted reasonable sales effort to Queensbury clutches and secured a satisfactory volume of sales his territory would not be interfered with. The distributors on their part were free to sell competing clutches. Although many of the distributors did sell more than one make of clutches, it was the company's experience that they preferred to concentrate their efforts upon one make; in the case of the company's selected distributors that make was the Queensbury.

In order to encourage its distributors to carry stocks of its clutches the company allowed a discount of 33 1/3% on all purchases by distributors who placed an initial order for 12 clutches, amounting in value to $200. These distributors were known as "stock dealers." The discount allowed other distributors was 20%. As a means of encouraging distributors to order more than one clutch at a time, furthermore, the company on all orders for one clutch, whether from stock dealers or other distributors, added 10% to the list prices before deducting the distributors' discounts. In 1927, approximately 98% of the company's distributors were so-called stock dealers; that is, dealers who had placed initial orders for 12 clutches each. Manufacturers who bought clutches directly from the company for resale with their

machinery were allowed a discount of 25% from list prices.

The sales manager for the clutches visited the distributors once or twice a year. In the intervals between his visits, the distributors ordered by mail. The size of unit orders varied widely. Most orders were for at least two clutches and often six or more clutches were ordered at a time. It was the company's opinion that the stocks carried by its distributors were in the main satisfactory.

The company did not advertise its clutches in trade papers. It supplied its distributors with catalogs and also with circulars, bearing their names, for distribution to their customers. In the 10 years from 1917 to 1927, sales of Queensbury clutches showed steady increases. Sales in 1926 were double those in 1925 and sales in 1927 were substantially in excess of those in 1926.

COMMENTARY: The first point to be noted in this case is the segregation of the sales organization, whereby the clutches were not sold by the salesmen who secured orders for road oiling and tarring equipment, street sweepers, and power pumps. The reasons for this segregation are clear. The road maintenance equipment and the power pumps were sold in sufficiently large quantities, with large enough unit sales, to permit sales direct to users. The markets for the road maintenance equipment and the power pumps were clearly distinct from the market for friction clutches, with different buying habits and different technical problems.

The company's decision to market clutches through distributors seems to have been governed in part by the fact that the clutches were a side line, taken on to facilitate greater regularity in plant operations rather than to gain an advantage in marketing. By placing the marketing of the clutches largely in the hands of distributors, the company left its executives free to devote their major attention to the marketing of road maintenance equipment and pumps. Nevertheless, the clutches were suited for distribution through supply firms, except when sold as a fabricating part to machinery manufacturers: the unit sale to users usually was relatively small; the market included a large number of companies in practically all sorts of industries; and the clutches could be sold advantageously in association with other power transmission equipment. The success which the company attained in marketing clutches through distributors was enhanced by the care with which the distributors were selected, in order to avoid overcrowding any particular market.

December, 1927 M. T. C.

McKinney & Company[1]

MANUFACTURER—VALVES AND GAUGES

DISTRIBUTION CHANNELS—*Direct Selling Utilized in Preference to Distributors.* It was proposed that the company, a manufacturer of high-grade valves and pressure gauges, should offer to wholesalers and supply firms a discount from its prices to users in order to encourage the distributors to sell its valves. The company, however, decided to continue to sell directly to users by means of its own salesmen and to offer wholesalers and supply firms no better terms than it offered users.

(1927)

In 1927 it was proposed that McKinney & Company, manufacturers of high-grade valves and pressure gauges, should undertake to sell a larger portion of their valves through wholesalers and supply firms. At that time the company was depending for its sales volume, which amounted to several hundred thousand dollars a year, entirely upon the efforts of its own salesmen. Whatever sales it made to wholesalers and supply firms were made upon the same terms that were given users. Practically no advertising was done by the company. The purpose of selling through wholesalers and supply firms would be to increase total sales. The company would not expect to lessen its direct sales efforts.

The prices of the company's products were, in general, higher than those of competitors, and the company sold on a basis of quality. Unit prices ranged from $4 to several hundred dollars. With the exception of a few standard models, the gauges were made to order. The valves, on the other hand, were as a rule manufactured for stock, although the range of pressures in which valves of each type and size might be called for was so great that in the case of some of the less common and more expensive types the company could not afford to carry stocks and hence manufactured to order.

The company sold to a wide variety of manufacturing plants and also to power plants, railroads, and marine lines. The sales manager stated that the markets for the valves and the gauges were practically the same.

The company had four salesmen. One sold in Chicago; one

[1] Fictitious name.

sold in New York City and surrounding territory; one sold in Pittsburgh and vicinity; and one sold in New England. The Chicago salesman also covered the oil field in the Middle West. At the four cities from which its salesmen operated, the company carried small stocks. The salesmen called on each actual or prospective customer in their territories two or three times a year. Between salesmen's visits customers mailed their orders to the company. The salesmen were paid straight salaries.

The general sales manager stated that orders for the company's products usually originated with the chief engineers in the purchasers' organizations, and that the salesmen therefore sought to see those officials. A large part of the orders which the company received were repeat; the sales manager stated that the company depended for its sales volume very largely upon the satisfaction which its products gave in use. Repair parts were needed with comparative frequency, and sales of repair parts comprised from 15% to 20% of the company's total sales.

Quick delivery was important in the sale of valves, because users seldom placed orders for valves until they actually needed them. The company required from a day to several months to fill an order, depending upon whether the items ordered were in stock and upon the size of the order.

The company decided not to undertake to sell through wholesalers and supply firms. The chief reasons given for this decision were: distributors would require a discount from list prices to users of from 20% to 25%, and after this discount the company's gross margin would be inadequate; inasmuch as the company's valves were of high grade and consequently high in price, the distributors would tend to favor competing valves.

COMMENTARY: The point at issue in this case is whether McKinney and Company could have gained a net advantage by granting a discount to distributors in order to encourage them to purchase the company's valves for resale. Such a change in policy might have been warranted—if there had been evidence that a substantial number of customers or potential customers were dissatisfied with the company's distribution service; or, if the company could have effected a reduction in its marketing expenses commensurate with the discounts to be granted, without lessening the effectiveness of its distribution methods.

It is stated that the users ordinarily required prompt deliveries; but there is no evidence presented to show that complaints were common

regarding the company's service. There is no indication that a substantial number of orders was being lost to the company because of delays in delivery. Inasmuch as the company intended to continue to operate its sales force, there would have been no direct reduction in marketing expenses by selling also to wholesalers and supply firms.

The wholesalers and supply firms undoubtedly would have secured some orders for McKinney valves from sources not reached by the company's own salesmen. The wholesalers and supply firms presumably sold valves to numerous establishments, for example, establishments too small for the McKinney salesmen to call upon. The aggregate purchases of those small establishments, however, probably constituted but a fraction of the purchases of large users, and from the standpoint of McKinney and Company the potential gain in distribution to small users through wholesalers and supply firms very likely would not have counterbalanced the risk of unsettling the company's relations with its existing customers.

The company was securing a large volume of repeat orders by mail directly from users. This condition was highly satisfactory. It would not have been improved by having wholesalers and supply firms also soliciting orders for McKinney valves from these customers. In so far as the wholesalers and supply firms would have secured orders that under the existing plan were sent in directly by mail, the company would have lost by the amount of the discounts allowed to the distributors.

The company had a reasonably effective plan in operation for direct distribution. There is no evidence that its customers desired a change in its methods of distribution, or that it was losing a substantial volume of potential sales by adhering to its policy. Hence its decision not to grant the discount to distributors was sound.[2]

October, 1927 M. T. C.

[2] See also Everett Elkins Company, page 130.

Everett Elkins Company[1]

MANUFACTURER—GAUGES AND INDICATORS

Distribution Channels—*Direct Selling Utilized in Preference to Exclusive Distributors.* The company, a manufacturer of dial gauges and indicators, made the larger part of its sales directly to users upon orders received by mail; most of its customers were of long standing. Some sales were made through three supply firms without exclusive territories. The company in 1926 and 1927 received inquiries from several supply firms which were interested in selling its products under exclusive agency arrangements. The company decided, however, to continue its plan of direct sale.

(1927)

Although the Everett Elkins Company had been one of the first to manufacture dial gauges and indicators, its volume of business in 1927 was small, amounting in value to approximately $30,000 annually. Even with this small volume, however, the company had national and international distribution. In order to reach effectively its scattered markets in the United States, the company, which was selling directly to users, contemplated selling through supply firms serving those industries which constituted the chief markets for its products.

Elkins products were carefully constructed and in general were higher in price than competing products. Prices for Elkins gauges and indicators ranged from $10 each to $55 each. The indicators, total annual sales of which amounted to about $10,000, showed variations in thickness or depth and were used chiefly in automobile factories and in machine shops, attached to milling machines, grinders, and lathes. The indicators were regarded as particularly useful in connection with volume production of interchangeable parts. The dial gauges, with annual sales of about $12,000, were used to measure the thickness of materials such as rubber, paper, cardboard, strawboard, leather, mica, films, and textiles. The firm also sold dial gauges to watch manufacturers, to chewing gum manufacturers, to soap manufacturers, to piano manufacturers, to tobacco companies, and to various other industries. The paper and rubber industries were the most important users of the gauges. The company manufactured chiefly for stock. It would

[1] Fictitious name.

manufacture special gauges or indicators upon request, but it did not solicit such special-order business. The company's factory was located in New England, but the larger part of its sales were made in the Middle West and South. This was thought to result from the keen competition which the company met in the East from other gauge manufacturers located there.

In addition to the finished products, the company sold repair parts. The company also repaired gauges and indicators sent in to the factory by users. This repair work, together with sales of repair parts, represented an annual volume of between $7,000 and $8,000, or about 25% of the company's total business. The adjustments of the instruments were delicate and, although the life of the instruments was long, repairs were needed frequently. The president of the company was of the opinion that much of the need for repairs resulted from careless handling by unskilled operators. The company figured that its percentage of profit was larger on repair work and sales of repair parts than on sales of gauges and indicators.

In 1927 the company was making the larger part of its sales directly from the factory upon orders received by mail. Some sales were made through three supply firms, one of which was located in Akron, one in Detroit, and one in Flint. Those firms sold on a commission basis, receiving 25% of the selling price. They did not have exclusive territories, nor did they provide repair service or carry stocks. All shipments were made f.o.b. the company's factory. The company had made no effort to encourage other supply firms to sell its products. Unit sales ranged from 1 instrument to 100 instruments, but usually were comparatively small. The company offered a graduated scale of quantity discounts for orders of 6 or more instruments. Prices and discounts were varied to meet particular conditions.

To secure orders the company inserted small advertisements in trade papers, chiefly those for the rubber, paper, and machine industries. It also, from time to time, sent circulars to selected lists of prospective users. Inquiries not resulting in orders were followed up by letters. The company intended to replace the circulars to a large extent by a catalog illustrating and describing its products. Total advertising expense amounted to 4% or 5% of sales. The company, however, relied for orders chiefly upon the satisfaction which its products gave in use. Although it continu-

ally sold to new customers, most of its customers were of long standing.

Prompt delivery and quick repair service, the president stated, were important in marketing the gauges and indicators. Users customarily did not keep extra instruments or supplies of repair parts on hand. The company, however, deemed the expense of maintaining branch stocks prohibitive.

When the company first placed its gauges on the market it had made a large paper supply firm located in Boston its exclusive distributor for the paper industry in the United States and Canada. This arrangement had been for a period of 15 years. The Everett Elkins Company had been free to sell to any industry but the paper industry. The exclusive distributor had advertised Elkins gauges and had succeeded in introducing them to paper manufacturers. During the period of the contract, however, the company received numerous complaints from large paper manufacturers who wished to buy direct. For this reason, when the contract expired, the company did not renew it.

In 1926 and 1927 the Everett Elkins Company received several inquiries from supply firms which were interested in selling its gauges and indicators under exclusive territorial arrangements. The president, however, was reluctant to relinquish any part of his direct control of the business and decided not to follow up these inquiries. He was of the opinion that distributors would require a discount of at least 25%. They would be expected to carry stocks of instruments and repair parts and perhaps to provide repair service.

COMMENTARY: The Everett Elkins Company had a business which was small but which apparently was progressing. The company had established a dependable patronage among users. If it had granted exclusive territories to distributors, it would have interfered with its established patronage, a risk that it could not afford to take without having assurance that the distributors would purchase and resell a larger volume of goods than it was selling by its existing methods. Such assurance apparently was not forthcoming. If the existing method of marketing had been discarded without assurance of a fully compensating volume of orders from distributors, the company would have jeopardized its existence. It is to be noted, furthermore, that the company was selling almost its entire output by advertising at an expense of 4% to 5% of its sales, whereas the distributors would have required a discount of 25%. The distributors, therefore, would have had to

sell a much larger quantity of the company's products than the company already was selling to enable it to secure a net profit as large as it was obtaining. There is no evidence that the company could expect to secure such an increase in its volume of sales by granting exclusive franchises to distributors.

If the company had just been starting out in business, or under various other circumstances, a different decision very likely would have been reached. But under the circumstances stated, the proposed change in policy involved too great risk to justify its adoption.[2]

October, 1927 M. T. C.

[2] See also McKinney & Company, page 127

Radams Chemical Company[1]

MANUFACTURER—CHEMICALS

Distribution Channels—*Direct Sale Utilized in Preference to Distributors.* The company, a manufacturer of heavy chemicals, in the period from 1921 to 1927 changed from a policy of indirect distribution to one of direct sale. In 1927, however, a small volume of sales still were being made through distributors, to whom the company granted protection. The question of discontinuing distribution through distributors in the company's local territory was raised

(1927)

The Radams Chemical Company manufactured chemicals for sale to tanneries, paper mills, steel and wire producers, celluloid and smokeless powder manufacturers, fertilizer companies, artificial ice and refrigerating plants, foundries, brass finishers, engravers, and other users. Its sales volume in 1926 was about $6,000,000. There were 105 items in the company's line, most of which were heavy chemicals. Since the prices of these products were low in proportion to their weight, the company's market area, because of freight charges, was definitely limited. In 1927 approximately three-quarters of the company's sales were being made within a radius of 250 miles from the plant. At that time practically 90% of the sales were made directly to users. The remaining 10% were made to dealers, who resold to the same types of customers to which the company sold. The company was of the opinion that the portion of its sales which were made through dealers in its local territory could be made directly with greater profit, but it hesitated to break long standing relationships with its dealers.

Until recent years the Radams Chemical Company, which was over a half-century old, had distributed the major portion of its output through dealers. Although there had been an increasing tendency to sell directly to large industrial consumers prior to 1920, the company had not seriously encouraged direct sales until 1921. By 1927 direct selling had become the company's chief method of distribution. A combination of causes had brought about this change: the two most important causes, the sales man-

[1] Fictitious name.

ager stated, were the increased severity of competition and the change which had taken place in transportation methods.

Price competition became severe in 1921, as a result of over-expansion and declining demand. Chemical manufacturers had begun to increase their production capacity in 1914 to meet the demands of warring nations; and capacity had been further expanded when the United States entered the war. The temporary business prosperity after the war kept up profits; but when the boom was over, readjustment became necessary. The industry was out of balance for peace-time demand. During the following years, many kinds of chemicals were produced at practically no profit, especially those the production capacity for which had been expanded to meet the purely war-time requirements. Furthermore, there was an excess capacity for some chemicals which were not used for war purposes. Usually the production of one chemical necessarily involved the production of several others, as intermediate products and by-products. The development of production capacity for war demands, therefore, threw the industry out of balance both directly and indirectly and both as to total capacity and as to capacity for particular chemicals. The result was that, after the war and the boom period were over, price competition became severe in practically all lines and especially in some of them.

Through its effect upon transportation the war caused another pronounced change in the chemical industry. The war hastened the use of the automobile truck as an important factor in long-distance transportation. Railroad congestion gave the long-distance trucking business a great impetus; then, when the depression came, trucking companies found themselves with unutilized capacity. It therefore became necessary for them to haul goods at very low rates, at least in one direction, in order to avoid dead mileage. Companies trucking goods between Worcester and New York City, for example, were able to obtain full loads southward but could not obtain satisfactory volume for return trips at their normal freight rates, so they offered low rates for New York City to Worcester. These low trucking charges, combined with the advantage to customers of having the goods delivered to their warehouses, made it possible for those chemical manufacturers which were favored by the low rates to compete in wider territories.

It so happened that the change in transportation method worked to the advantage of competitors of the Radams Chemical Company in much of its territory. However, within the immediate vicinity of its plant, a territory with a population of over 1,000,000, the company was relatively free from competition. There were no large competing manufacturers of heavy chemicals within 200 miles of the city where the company was situated.

The Radams Chemical Company considered it worth while to compete for the heavy chemical trade in any area where the freight charges to the buyers did not exceed 10% of the cost of the products at the company's plant warehouse. This meant that for the majority of its lines, the typical price of which was $26 a ton, the market was confined to companies located within 250 miles of the plant.

Although heavy chemicals were highly standardized and were purchased chiefly on a price basis, the company stressed the high and uniform quality of its products. All Radams products passed rigid tests for uniformity and purity before leaving the plant. The company also stressed its technical service to users. It was the wish of the company that its customers should seek the services of its research department in solving any problems involving the use of Radams products. The company deemed its chief asset the goodwill of its customers. The foundation of its business policy was stated to be courtesy, frankness, highest quality of products, and excellence of service.

The company advertised its products to some extent in trade journals. It did not regard such advertising as particularly effective in stimulating sales, however, and most of its advertising was done directly by mail. The advertising program was flexible, but in general the company undertook to send out each month to all actual and potential customers one piece of direct-mail advertising for some one product.

The company employed 20 salesmen, 14 of whom traveled from the home office. Most of them were trained in chemistry before employment; those who had no previous technical education soon became familiar with the products and their uses and were able to give advice to customers. The technical ability of salesmen played a large part in selling. Customers had greater confidence in the company and its products when the salesmen knew how the products were made and how they were used. In addition, technical

knowledge made easier the adjustment of those difficulties and complaints which resulted from wrong methods of using the Radams chemicals.

The sales force was segregated according to industries. When a new product was introduced, however, the company arranged for one man to handle the sales in all industries that constituted potential markets until the product had been established. With the sales force segregated by industries, the salesmen were able to become well acquainted with the detailed problems in the industries served.

The Radams Chemical Company had long-established relationships with its dealers. Many of them had sold the company's products for over 25 years. The dealers bought outright, warehoused the chemicals, and sold on their own account. The larger dealers usually carried about 40 of the 105 items manufactured by the company. They sold other process materials and supplies, but carried no competing lines. Although the company sold directly in its dealers' territories, the company and the dealers generally did not compete for each other's regular customers.

Dealers were granted a 5% discount off the carload price to users on purchases of 20 or more carboys.[2] All bills were due in 30 days, with a 1% cash discount for payment within 10 days. Prices were quoted both f.o.b. and delivered. A typical price schedule was that for oil of vitriol, for which the prices per hundredweight for purchases of specified quantities were as follows:

Carload	50 carboys	20-49 carboys	5-19 carboys	1-4 carboys
$1.45	$1.55	$1.70	$2.00	$2.50

Radams salesmen were required to adhere strictly to the company's price schedules. Dealers established their own price schedules; but generally their prices did not vary much from those of the Radams Chemical Company. The percentage of profit to the dealers and also to the company was the largest on small orders from customers located within 15 miles of the warehouse, a distance considered convenient for local trucking.

In 1927 the company was selling to 18 dealers, 7 of which were in the city where the Radams Chemical Company was located. Each of the remaining 11 dealers was located in a different city

[2] A carboy contains 13 gallons.

within 50 miles of the company's plant. Prior to 1921 the 5% discount had been granted to any dealer. Since that time the company had found it advisable to set a minimum annual purchase requirement to be met before the discount would be granted. In 1927 the minimum requirement was made $5,000. The immediate cause for establishing the minimum requirement was the keen competitive situation which forced the company to sell on a narrow gross margin. Furthermore, the company did not think that it was fair to sell to dealers whose annual purchases were small at lower prices than were granted to industrial users who bought large quantities direct.

None of the dealers selling Radams chemicals outside the city in which the company was located had been affected by the minimum requirement, inasmuch as the annual purchases of each exceeded $5,000. But among the 28 dealers in chemicals which there were in the company's city only 7 were eligible for the discount under the 1927 requirements. Withdrawal of the Radams line had worked no hardship on these local dealers, however, because their sales of Radams products had formed only a small fraction of their total business. Most of the dealers who discontinued selling Radams chemicals did not begin handling competitors' products. Freight rates from competitors' plants to the dealers' warehouses made the delivered prices of competitors' products appreciably higher than the prices of most of the Radams products. Furthermore, reputable chemical manufacturers seldom granted discounts to former dealers of a competitor when these dealers were located in the home city of the competitor. Manufacturers refrained from such a policy in order to prevent ruinous price competition. The customers of the dealers who ceased to handle Radams chemicals thereafter purchased those products directly from the company or through other dealers or, in a few instances, began to buy competing brands.

One of the officers of the Radams Chemical Company was of the opinion that the local trade could be handled more economically and with greater profit to the company if the seven remaining dealers ceased to handle the Radams line. The cost of obtaining and filling small orders was estimated to be appreciably less than 5%, the amount of the dealers' discount. In territories outside of the local trucking area, however, continuance of dealer distribution for small orders was deemed advisable, chiefly be-

cause of the lower transportation costs and incidentally because of the prompter delivery that method afforded small customers.

The 7 local dealers had 300 to 400 customers. Those customers were mostly manufacturers who needed chemicals for incidental purposes; their annual purchases were typically 6 or 8 carboys, or amounts ranging between $25 and $100. They usually purchased one carboy at a time. Practically none of the local dealers' customers were large users of chemicals placing fill-in orders; there was no reason for the large users to patronize dealers since the Radams Chemical Company could deliver in the local area as quickly as the dealers.

The Radams Chemical Company was selling directly to about 1,000 customers in the metropolitan area. Many of them were as small as the usual customers served by the dealers. Several Radams salesmen spent a large portion of their time in the local territory. Each salesman made an average of six calls a day; four or five calls a year upon each customer were necessary. The customers of the dealers, the sales manager stated, could be served directly by the Radams Chemical Company with little increase in sales force or in sales expense. Warehousing expense would not have to be increased much since stocks of most lines already were carried. No analysis of the cost of handling the small, local orders had been made; but, in 1926, total selling expense was slightly over 1% of total net sales. This figure included such items as salaries of the sales force and of the office force for the selling department, traveling expenses, advertising, rent, and heat. Warehousing was included when it was done especially for the selling division. Furthermore, seasonal variation did not enter into the problem because demand was almost constant from month to month, except in April and September, when sales were slightly above the monthly average.

Another officer of the Radams Chemical Company did not believe that the company should discontinue relations with its dealers. Several of the dealers, during the period that they had distributed the company's products, had sold a million or more dollars' worth of Radams chemicals. Their sales were chiefly in small lots, a trade which was relatively expensive to reach. Although dealers usually could not offer as expert technical service as was given by the Radams Chemical Company, their salesmen generally had some technical training. It was pointed out, more-

over, that friendship influenced customers' selections of the sources of purchase, that discontinuance of the dealers might create ill will among the dealers' customers, and that the Radams Chemical Company might experience difficulty in obtaining the patronage of those customers. In this respect the company had already had an unfortunate experience. In 1917 it had discontinued relations with a dealer because of his dishonesty but had not made the reason for this step public. The dealer was resentful and made a general complaint of unfair treatment. Several users of chemicals believed the dealer's story and, on that basis, refused to buy Radams chemicals. Even in 1927 the company encountered unfavorable reactions from this incident.

COMMENTARY: The problem in this case was one of expediency rather than one of principle. The company had established its policy of selling directly to most users. It was, however, making a small proportion of its sales to dealers. In territories beyond a 15-mile trucking radius from the company's warehouse the services of dealers were needed for supplying small users. In the local market, however, there was not the same justification for distributing through dealers and the question, therefore, arose whether the company should continue to grant a discount of 5% to the local dealers and refrain from soliciting orders from their customers. The two chief considerations involved in deciding this point were: first, the probable effect of such action upon the Radams Chemical Company's profits; second, the obligations which the company owed to these dealers.

The effect of such a change on the company's earnings was problematical. Less than 10% of the company's sales were involved, hence only a small fraction of its total earnings were concerned. The dealers resold Radams chemicals in small lots, to users for whom chemicals usually were incidental purchases. If the Radams Chemical Company were to have made these sales directly to the users, the company would have saved the 5% discount granted to the dealers and it would have received the higher prices charged for small lots according to its price schedule. These gains would have been offset partially by the greater cost of soliciting and handling more small orders. This company looked upon small orders as being lucrative. Numerous manufacturers in other industries have had a contrary experience. At all events, the amount of the gain that would have accrued to the company by such a change in policy would have had little influence on its aggregate earnings, and the exact amount of the gains was uncertain.

So far as the users of chemicals who purchased from the dealers were concerned, they paid about the same prices and received about

the same service from the dealers that they would have received directly from the Radams Chemical Company. Their interests, therefore, were not involved in the decision.

The chief factor which deterred the company from discontinuing the protection of the local dealers was its friendly relations with them and the ill will that might have been engendered by a change in policy. The real questions on this point were: What treatment was the company bound in common decency to accord to dealers who were rendering satisfactory service? What representations had been made to the dealers regarding the course that the company was to follow? What had they been led to expect?

If the dealers had been given to understand that the company intended to continue to supply them under the stipulated conditions, the company could not decently change its plan so long as the local dealers fulfilled the conditions.

February, 1928 M. T. C.

Frame Wire Company[1]

MANUFACTURER—CABLE

DISTRIBUTION CHANNELS—*Competitive Bidding against Wholesale Customer.* For several years the company had manufactured for one of its large wholesale customers a special cable for resale to a power company. In February, 1922, the power company, contrary to its previous practice, asked for competitive bids on the special cable. The manufacturing company thereupon advised the wholesaler that it intended to bid for the contract. The wholesaler then threatened to withdraw its patronage from the manufacturing company unless the company made its bid 5% higher than the price at which it would sell the cable to the wholesaler.

(1922)

In February, 1922, the Moraine Power Company[1] appointed a new purchasing agent. This agent announced that all large orders for supplies thereafter would be open to competitive bidding. The Colt Company,[1] an electrical supply wholesale firm whose president, Mr. Colt, had been an intimate acquaintance of the former purchasing agent, had received the bulk of the Moraine Power Company's small orders and also an annual contract for 150,000 feet of special cable. This contract for special cable was one on which the new purchasing agent of the Moraine Power Company had decided to ask for competitive bids. The Frame Wire Company always had made this special cable for the Colt Company, and, although the sales manager of the Frame Wire Company, Mr. Hall, knew to whom it was to be resold, he never had attempted to sell directly to the Moraine Power Company.

Upon the announcement of the change of policy by the new purchasing agent, Mr. Hall advised the Colt Company that he intended bidding for the contract. Mr. Colt immediately demanded that Mr. Hall bid 5% higher than the price at which he would sell the cable to the Colt Company, thus enabling the two companies to make the same bid. Mr. Colt demanded this protection on the ground that the Moraine business had been originated by himself and had been handled by his firm for over 10 years. Mr. Hall replied that if manufacturers quoted freely on the cable, no wholesaler could hope to quote the lowest price un-

[1] Fictitious name.

less poor goods were substituted. Furthermore, if the Frame Wire Company protected the Colt Company in its bid, the former would be on the same price basis as wholesalers, and neither company would be likely to secure the business. Mr. Colt, who felt bitterly about the whole situation, called Mr. Hall's attention to the fact that the Colt Company had purchased practically all its wire and cable, aggregating $40,000 to $50,000 annually, from the Frame Wire Company, and he intimated that he would curtail his purchases if Mr. Hall insisted on bidding on the order of the Moraine Power Company without protecting the Colt Company.

The Frame Wire Company had undergone several unfortunate experiences with long-term contracts. Customers had gladly taken their commitments while the contract price was below market, but, in several instances, had canceled the remainder when the market had dropped below the contract price. In no case had the Frame Wire Company attempted litigation, although it had suffered losses because of raw material commitments made on the strength of the contracts. Although Mr. Hall was not in favor of contract selling for these reasons, customs of the trade prevented his abandoning the practice entirely; wiring for buildings, ships, and other special construction usually was purchased on contract. About 10% of the company's sales had been on contracts. The remainder had been on current orders from wholesalers and large consumers. Total sales in 1921 were about $3,980,000.

The Moraine contract for special cable involved approximately $7,500, on which the Frame Wire Company would make 5% to 6% greater net profit than it made on regular stock goods. The Frame Wire Company had carried on business with the Colt Company for almost 15 years; but the question of bidding on contracts never had arisen. If Mr. Hall refused Mr. Colt's request, there was reason to believe that Mr. Colt would fulfill his threat. On the other hand, if Mr. Hall complied with the request, a precedent would be established, not only with the Colt Company but with all the wholesale trade. Business conditions early in 1922 placed a premium on retaining the goodwill of old customers but at the same time made it imperative that every possible order should be obtained.

COMMENTARY: Mr. Colt, the wholesaler, had taken an untenable position in this case. If the Frame Wire Company met Mr. Colt's demand, that it quote a price in bidding that was 5% higher than the

price which it was willing to accept, almost certainly neither the Colt Company nor the Frame Wire Company could secure the contract with the Moraine Power Company. The order was large enough to be placed directly and probably would be placed directly with some manufacturer who did not charge for a merchant's services which were not needed.

The Frame Wire Company previously had been selling a portion of its output directly to large users, apparently without protest from the Colt Company. The Frame Wire Company, therefore, would not have been changing its general policy if it had bid on the Moraine contract. The Colt Company seems to have received preferential treatment from the former purchasing agent of the Moraine Power Company. The action of the new purchasing agent indicated that the wholesale firm no longer was to receive that preferential treatment. The Frame Wire Company was in no wise responsible for this change in policy by the Moraine Power Company, and Mr. Colt had no ground on which he fairly could demand that the Frame Wire Company refrain from bidding on the Moraine contract, if it so desired, on the same terms that it would bid on other contracts.

October, 1927 M. T. C.

Chalders Manufacturing Company[1]

MANUFACTURER—WATER STILLS

Market Selection—*Direction of Sales Efforts to New Markets.* Inasmuch as its plant facilities would permit a 50% increase in output and its financial condition was sound, the company, which manufactured apparatus for distilling water, decided to increase its sales efforts. Increased sales efforts could be directed toward further cultivation of the existing markets or toward the development of new markets. The company decided to undertake the development of markets which as yet made little use of water distilling machines. The markets selected were: coal and metal mines; retail drug stores; and garages and service stations.

Distribution Channels—*Use of Supply Firms and Direct-by-Mail Solicitation.* When the company, a manufacturer of water distilling apparatus, decided to attempt to develop a market for its products among coal and metal mines, retail drug stores, and garage and service stations, it was necessary to decide upon channels of distribution. The company at the time was selling in the general laboratory market, the hospital market, and the market among mirror manufacturers both through supply firms and directly by mail. The company decided to use mine supply firms for reaching the mines market but to try to sell directly by mail to drug stores, garages, and service stations.

Distribution Channels—*Reference of Inquiries to Distributors.* The company sold its water distilling apparatus both through supply firms and directly to users by mail; the company employed no salesmen. Only a few of the supply firms had exclusive territories; it had been the company's policy to sell directly whenever possible and to refer inquiries to distributors only when it was evident that the orders could not be obtained otherwise. In order to foster friendly relations with distributors and to provide personal salesmanship for its machines whenever possible, the company decided to refer to its distributors all inquiries from territories in which salesmen of the distributors traveled.

Merchandising—*Addition of Lower-Grade Product to Line.* It was suggested that the company, a manufacturer of high-grade water distilling apparatus, if it was to develop a market among garages and service stations would have to add a lower-grade machine to its line. The company's machines were higher in price than competing machines and the extreme purity which they gave was not necessary to garages and service stations. The company, however, decided not to add a cheaper machine to its line and to direct its sales efforts to the large, high-grade garages and service stations.

(1927)

[1] Fictitious name.

In 1927 the Chalders Manufacturing Company had been making apparatus for distilling water for half a century, and, among users, its machines were well and favorably known. For many years the company had made little effort to develop its market and had manufactured to meet orders secured by laboratory supply firms. The company had had little competition and, since distilled water was a necessity in laboratories, it had been certain to receive a reasonable volume of orders. For a few years prior to 1927, however, the company had actively undertaken to increase sales, chiefly by means of advertising.

Early in 1927 the company decided that it was in a position to make a moderate increase in its sales efforts. Factory output could be increased 50% with existing plant facilities, and the financial condition of the company was sound, although its resources were definitely limited. It was necessary for the company to decide whether it should direct added sales efforts to the further development of the laboratory market, to which in the past it very largely had confined its sales efforts, or whether it should undertake to develop a new field. Three possibly fruitful markets were coal and metal mines, garages and service stations, and retail drug stores.

Chalders machines for distilling water could be classified according to the method of heating to which they were adapted. Some were steam heated; some were gas heated; some electrically heated; and some heated by kerosene. The capacity of the machines ranged from one-half gallon of distilled water an hour to 100 gallons an hour; list prices f.o.b. factory ranged from $30 a machine to $1,200 a machine. The average cost of water distilled with Chalders machines, including interest and depreciation, was 4 cents a gallon. In the case of some of the large, steam heated machines, the cost was as low as 1/3 of a cent a gallon. The life of the machines was long and repairs were needed infrequently. Competing machines in general were materially lower in price than Chalders machines. This resulted, the general sales manager of the Chalders Manufacturing Company stated, from the fact that competing machines usually did not include heating units or plates and were not built to give the same high degree of purity given by Chalders machines. Outside of chemical laboratories, distilled water of absolute purity was not always essential, the sales manager stated.

Distilled water had a wide variety of uses. In laboratories, maintained by schools and colleges, by industrial plants, by chemists, by government bureaus, and by hospitals, it was a necessity. It also was needed by manufacturers and users of storage batteries, by garages and automobile service stations, by physicians, and by pharmacists. In the manufacture of mirrors distilled water was a necessary element. In the manufacture of soaps, tooth pastes, lotions, medicines, beverages, syrups, extracts, perfumes, dyes, and chemicals, distilled water was decidedly superior to ordinary undistilled water.

The company, in 1927, had three well-developed markets for its products; the general laboratory market; the hospital market; and the market among mirror manufacturers. Approximately half the company's sales were of machines for use in academic, industrial, governmental, and other research laboratories. In addition to the three well-defined fields, Chalders machines were used to some extent by manufacturers of toilet preparations, manufacturers of foodstuffs, photographers, mines, retail drug stores, garages and service stations, radio stations, and by numerous other types of organizations. Each of these markets, in the company's opinion, was capable of substantial development.

The company made approximately 60% of its total sales to distributors for resale and approximately 40% directly to users. The company had no salesmen, either to call upon users or upon distributors. Instead, the company relied upon advertising, for which it spent about 10% of annual gross sales. Most of the advertising appropriation was used for full-page insertions in industrial magazines read by laboratory men and plant operating officials in those industries which used distilled water. The company also advertised in several directories, prepared a catalog, and occasionally circularized selected lists of potential users.

The proportion of sales which the company made directly had been increasing as the company's advertising increased. Until 1927 it had been the company's policy to sell directly whenever possible upon inquiries received. The company had four distributors with exclusive territories, and inquiries received from those territories had been referred to those firms. In the case of inquiries from other territories, however, the company ordinarily had undertaken to sell directly unless it appeared that personal contacts would be needed for securing the orders. Some-

times, also, after the company had failed to make a sale directly, the inquiry had been referred to a distributor. Early in 1927 a question had been raised as to the wisdom of this policy of undertaking to sell directly whenever possible, and the company had decided to follow a more liberal policy in referring inquiries to distributors. In general, whenever an inquiry was received from a territory visited regularly by a distributor's salesmen, that inquiry was referred to the distributor. If, however, the inquiry was from a territory in which the distributor had no salesmen, so that it would in any event be handled by mail, the company undertook to secure the order directly. This policy was intended to foster friendly relations with distributors and to provide personal salesmanship for Chalders machines in as many instances as possible.

For distribution of its products to mirror manufacturers, the company sold to two supply firms, which together covered the entire United States. To reach the hospital market, the company sold to several hundred supply firms. The company was satisfied with its distribution in these two markets.

To reach the general laboratory market the company had 12 major and 30 minor distributors. Four of the 12 major distributors had exclusive sales territories, and of the company's total sales to the 42 distributors about one-third were made to those 4. One exclusive territory included New York City and its immediate environs; one included the city of Philadelphia; one the city of Pittsburgh; and one the entire Pacific coast.

The distributors were laboratory supply firms, each of which sold several thousand items of laboratory equipment. One of the exclusive distributors ordinarily carried in stock 15 or 20 Chalders machines, amounting in value to $1,200 or $1,400. Each of the other 11 of the company's major distributors normally had in stock 6 Chalders machines, representing an investment of approximately $500. The other distributors ordinarily carried no stocks of Chalders machines at all, and on orders which they sent to the company, shipment was made directly to the users. The 12 large distributors also carried stocks of repair parts. Quick delivery ordinarily was comparatively unimportant in the sale of the company's products. In the sale of repair parts promptness was more important. Repairs were not often needed, however, and many large users, where a continuous supply of distilled water

was essential, carried extra parts. The supply firms which sold Chalders machines also sold competing machines, but ordinarily a supply firm favored one line, by filling orders from that line when no particular make was specified or by recommending that line when asked for an opinion. An executive of the Chalders Manufacturing Company stated that the most that the greater number of its distributors did to secure orders for its products was to list them in their catalogs.

The company encouraged the maintenance of the standard resale prices of its products and refused to sell to distributors who persistently cut those prices. The company's regular scale of discounts on electrically and gas heated machines for the laboratory market was:

Single machine shipped direct to user	20%
Stock order of 3 machines	25%
Stock order of 6 machines	25% and 5%
Stock order of 12 machines	30%
Stock order of 18 machines	30% and 5%
Stock order of more than 18 machines	35%
All repairs and parts	20%

The maximum regular discount for kerosene and steam heated machines was 25%. With the exception of the four distributors with exclusive territories, few of the supply firms placed stock orders for more than three machines. The four distributors with exclusive territories, in view of their large annual purchases from the company, were allowed a discount of 33 1/3% even on orders of one machine. To distributors in the general laboratory market who carried no stocks and who only occasionally sold a Chalders machine, the company gave a discount of from 10% to 15%.

In 1927 the executives of the Chalders Manufacturing Company were of the opinion that the company had adequate distributor representation in the general laboratory market. In that market the company estimated that sales of Chalders machines were as large as, if not larger than, total sales of all competing machines. If the company were to increase its sales efforts in that field, it would be for two purposes: to induce small laboratories which were buying distilled water to install machines for making their own distilled water; and to induce distributors to favor Chalders products. Competing manufacturers, the executives of the

Chalders Manufacturing Company stated, commonly allowed distributors larger discounts than were allowed on Chalders products. In spite of this, the reputation of Chalders machines was so firmly established that distributors often preferred to accept orders for Chalders machines rather than to stress the sale of competing products.

The laboratory supply firms to which the company sold its products not only sold to laboratories, but also to manufacturers of food products, to manufacturers of toilet preparations, ice plants, garages, and other organizations using distilled water. Salesmen of the laboratory supply firms did not call regularly upon actual and potential customers outside the laboratory field, however, and the Chalders Manufacturing Company was convinced that these markets were by no means adequately developed. In laboratories, distilled water was a necessity, but in many of these other markets use of distilled water was not essential although it was highly desirable.

In the opinion of the executives of the Chalders Manufacturing Company, coal mines and, to a lesser extent, metal mines offered the company a field for development. One of the executives pointed out that in recent years electrification of mines, particularly of coal mines, had proceeded rapidly. As a consequence, many storage batteries were used for mine locomotives, for miners' lamps, for starting gasoline engines used in the mines, and in connection with power trucks and automobiles. In 1926 the Chalders Manufacturing Company had employed an independent firm to make a survey of the mines market. That survey had included 47 representative coal mines throughout the United States. Thirty-four of those mines used distilled water and 13 did not. The quantity of distilled water used in the different mines varied from 10 gallons a week to 365 gallons a week. Of the 34 mines using distilled water, 23 operated water stills, 8 purchased distilled water, and 3 used condensed steam and rain water. Nine of the mines operating water stills used machines made by one of the company's competitors and 5 used machines which they themselves had constructed. The other water stills in use were made by several different companies. Few of the mines operated more than 3 machines for distilling water. The number of water stills actually in use in coal mines was, in the company's opinion, only a small fraction of the number that could advan-

tageously be used there. Many of the mines were using ordinary undistilled water for part or all of their storage battery requirements. The survey stated that there were more than 6,000 coal mines in the United States each producing over 10,000 tons of coal annually.

Two of the laboratory supply firms that were selling Chalders water stills were located in the mining regions of West Virginia and Pennsylvania. These firms, in addition to laboratory equipment, handled some equipment for mines, and they had sold some Chalders machines to mines. They had, however, made no decided effort to develop that market for Chalders products. One competing manufacturer had made some sales to mines, but this competitor, in the company's opinion, had not as yet established itself firmly enough in the mines' market to offer serious resistance should the company decide to enter that market actively.

Electrification of metal mines did not appear to have progressed so far as had electrification of coal mines. Nevertheless, metal mines represented a not inconsiderable, and an as yet almost wholly undeveloped, market for water stills. The company's exclusive distributor on the Pacific Coast and a distributor which it had in Denver, moreover, were metal mine supply firms as well as laboratory supply firms. They had not, however, made a particular effort to sell Chalders machines in the mines market.

If the Chalders Manufacturing Company decided to undertake the development of the mines market, it might undertake to secure distribution through the laboratory supply firms then selling its products, or it might seek distribution through mine supply firms. Direct sale by mail in this market the company deemed impracticable. Purchases of such items as water stills by mines were in the hands of mine superintendents and engineers.

Another market which the executives of the Chalders Manufacturing Company seriously were contemplating entering in 1927 was among retail druggists. The company from time to time had made sales to retail druggists, both directly and through the laboratory supply firms handling its goods, but in general this market was totally undeveloped, either by the company or its competitors. The company knew of 50 drug stores that were using its machines and estimated that there were at least that many more that it did not know of.

Most retail drug stores maintained departments for filling phy-

sicians' prescriptions. In filling those prescriptions, it was understood, an executive of the Chalders Manufacturing Company stated, that wherever water was called for distilled water was to be used. Retail druggists, moreover, frequently made up ointments and other medicinal and toilet preparations in which, for the best results, distilled water, because of its sterility and freedom from foreign elements, needed to be used. The company estimated that a retail druggist who used distilled water merely to fill physicians' prescriptions needed an average of one-half gallon of distilled water an hour, and that a retail druggist who not only filled prescriptions but also made up ointments and toilet preparations needed, on an average, two gallons of distilled water an hour. The Chalders Manufacturing Company knew of several retail drug stores which had installed apparatus for distilling water and which, in addition to using the distilled water for their prescriptions and other preparations, bottled the water and sold it for household use, to radio stores, and for other purposes. Tentative investigation of the drug store market by the company, however, showed that, as a rule, retail druggists either purchased distilled water or else used water that had not been distilled.

Distilled water, the company learned, was sold to users at prices ranging from 10 cents to $1 a gallon but was most commonly sold for 20 cents a gallon. A Chalders electrically heated machine of a type suited for use by retail drug stores and with a capacity of one-half gallon of distilled water an hour would cost the store $40.80. A gas heated machine of the same capacity would cost $30. An electrically heated machine with a capacity of one gallon an hour sold for $65. The company figured that, for electrically heated machines, the average cost per gallon of water distilled, including interest and depreciation, was 4 or 5 cents. In some areas, where rates for electricity were unusually high, the cost might be as much as 10 cents a gallon. The cost for a gas heated machine was approximately 2 cents a gallon of water distilled.

The company's machines were simple in construction and easy to operate. Repairs were needed infrequently. In the case of the electrically heated machines, for instance, about the only need for new parts arose from burning out an electrical unit. This was a comparatively uncommon occurrence and usually resulted from carelessness in use. Continuous operation of the machines

would be less important, the company believed, in the case of retail drug stores than in the case of laboratories or of manufacturing plants. Consequently, quick delivery of replacement parts would be comparatively unimportant. Price, on the other hand, would be a more important consideration in the purchases of retail drug stores than in the purchases of laboratories, manufacturing firms, or mines.

By means of advertising in druggists' trade papers and through use of direct-mail circulars, the company might be able to secure a substantial volume of orders from retail drug stores. It was possible that the laboratory supply firms that were handling Chalders products would resent any attempt by the company to secure this business directly. This was especially true of the four distributors with exclusive territories. Those distributors contended that they covered their territories completely and that on any sales which the company made in their territories, whether in the laboratory field or elsewhere, they should receive a commission.

The company would encounter this same difficulty in a more acute form if it selected new distributors to handle the retail drug sales. The company had given some thought to the advisability of undertaking to secure distribution for its products among drug wholesalers. Each wholesale druggist commonly carried in stock thousands of items such as patent medicines, pharmaceuticals, soaps, tooth pastes, other toilet preparations, candies, cigars, and stationery. In some instances, they also sold soda fountains and other items of store equipment. These wholesalers usually employed salesmen who called regularly upon the retail druggists in their territories.

Garages and service stations, another potential market for Chalders water stills, had constant need of distilled water for the storage batteries of automobiles, often supplying distilled water free to automobile owners. In many instances, however, garages and service stations, the general sales manager of the Chalders Manufacturing Company stated, used water that had not been distilled or else water that had been distilled by crude means. By installing a high-grade machine for distilling water, a garage or service station, the sales manager stated, should be able to increase its business through the assurance it could give customers that the distilled water it provided was reliable. Price was an

important consideration in the purchases of many garages and service stations, and it had been suggested that to enter that market successfully the company would need to produce a lower-grade machine, especially in view of the fact that competing machines were lower in price than Chalders machines. Chalders machines of a type suitable for use by garages and service stations ranged in price from $30 to $60 each. Ordinarily a garage or service station would not require more than one machine.

For the type of machines suitable for use by retail drug stores and by garages and service stations, the company's total production costs and overhead expenses amounted to approximately 75% of the list prices of the machines to users. This left a margin of 25% of list prices to cover selling expenses and profits. In the case of machines suitable for use by mines, total production and overhead costs approximated 50% of list prices.

The Chalders Manufacturing Company decided to begin to develop the market among coal mines. With this object in view, the company prepared a circular explaining applications of its product in coal mines for distribution to mine purchasing agents and operation officials. It also decided to insert a page advertisement in the *Keystone Coal Mining Catalog*, which was read by mine purchasing agents. In addition, the company arranged for a mine supply firm located in Pennsylvania to sell its products. That firm employed 10 or 12 salesmen who called regularly upon coal mines in the Pennsylvania territory.

The company decided to follow a conservative policy in entering the retail drug market. The initial step would be to spend one or two thousand dollars for advertising in druggists' trade papers and for direct-mail circularization; no definite plans relative to this advertising had been made by October, 1927. The response to this introductory advertising and further analysis of the field would determine the company's future policy toward the development of this market.

Although they recognized that among garages and service stations there might be a legitimate market for a lower-grade water still, the executives of the Chalders Manufacturing Company were unwilling to add a lower-grade machine to the company's line of products. They decided to undertake to develop the market among the large, high-class garages and service stations to which price was not the determining factor in purchases of equipment.

Definite plans for entering this market had not been made by October, 1927.

The company hoped to be able to sell directly by mail to retail druggists and to garages and service stations. The tentative plan of the company was to leave the general laboratory business to the laboratory supply distributors and to sell directly in the retail drug market and such similar special markets as the company might decide to enter.

COMMENTARY: Since the Chalders Manufacturing Company had facilities for increasing its production 50%, it was warranted in attempting to increase its sales. It adopted a constructive point of view in seeking to cultivate new and relatively undeveloped markets instead of trying to obtain a larger share of the sales in its existing markets. In entering the new markets which seemed to offer substantial sales opportunities, however, the company was certain to encounter new sales and distribution problems.

In the markets in which the company previously had sold its output, distilled water was indispensable; hence distilling apparatus was required. Inasmuch as a high degree of purity was essential in the distilled water used in laboratories, hospitals, and mirror manufacturing plants, the high quality of the apparatus sold by the Chalders Manufacturing Company was a distinct asset. In these markets the company's chief sales task was to convince prospective buyers that Chalders machines possessed the qualities which were desired. In other words, the company's task was to satisfy recognized wants. It is noteworthy that the company's output was sold by advertising; no salesmen were employed, and the distributors' chief service was the acceptance of orders which resulted from having the Chalders machines listed in their catalogs.

In the mining market the conditions were quite different from those in the markets in which the company previously had sold its products. Distilled water was not indispensable for operating the mines, and the advantages of a high degree of purity in the distilled water which was used were not generally recognized. These facts were brought out in the survey of the mine market made for the company. It also is to be borne in mind that, even in mines where full use was made of distilled water, distilled water was only a small item in the supplies required by the mines. Hence the company could not expect to command the attention in the mining market which it received in the laboratory field. Nevertheless, the unit of sale in the mining market would be substantial, from the company's standpoint, and the aggregate volume of potential sales was large.

For developing the mining market for distilling apparatus, stimula-

tive sales effort was required. The want for such apparatus was not keenly felt. Hence it was necessary to arouse primary buying motives as well as selective motives.[2] The task of developing the market, furthermore, involved problems of distribution, selling, sales promotion, and advertising.

The company was correct, in my opinion, in concluding that it could not expect to cultivate the mining market profitably by mail. Personal sales effort was necessary to incite buyers to action. Only in that way could the bulk of the potential orders be obtained in a market in which the need for the apparatus was not clearly recognized. The company could provide personal sales effort either by employing salesmen or by utilizing the services of distributors. Since the company had no established sales organization and since its financial resources were limited, it had little choice, as a practical matter, but to utilize the services of distributors. It was desirable that those distributors should be thoroughly acquainted with the mining industry.

Since the personal sales effort required for selling Chalders apparatus to mining companies went beyond the order-taking stage, it probably would be necessary to grant exclusive agencies to the distributors; at any rate, it would be necessary to use selected distribution. The Chalders Manufacturing Company should have had a definite understanding with the selected distributors, however, that their salesmen were actively to solicit orders for Chalders apparatus from mining companies, instead of merely passively accepting such orders as were stimulated by the company's advertising and the distributors' catalogs.

Advertising was essential for stimulating the demand for Chalders apparatus in the mining market, and the company properly decided to direct its advertising to mine superintendents and engineers. This advertising should have been expected to perform the major part of the sales task, with the distributors' salesmen closing the sales. The opportunities afforded for performance advertising and the simplicity of the technical problems involved should have rendered this plan workable.

The druggists' market was not so promising a field for expansion as the mining market. In the first place, the sale of distilling apparatus to retail druggists would not increase greatly the total quantity of distilled water used but rather would shift production from other sources to the retail drug stores. The sale of machines to drug stores, to produce water previously bought, would be a net gain to the Chalders Manufacturing Company only in so far as Chalders machines displaced the market for machines produced by other manufacturers. In the second place, the small-scale operations of the typical retail drug store probably would result in greater inertia in making a capital expendi-

[2] See Melvin T. Copeland, *Principles of Merchandising*, p. 169.

ture than existed in the mining market. Nevertheless, the experiment in advertising to drug stores which the company planned was worth making.

In the druggists' market distilled water was a necessity, as in the laboratory and hospital market. The question for each druggist to decide, therefore, was whether to buy distilled water or to operate a distilling machine. If he purchased a machine, it would be primarily for the purpose of reducing expenses, although convenience and assurance of purity might also be considerations. The extensive use of the company's machines in hospitals and laboratories was a strong recommendation to a druggist to purchase a Chalders machine, if he bought any. The hardest task for the company, presumably, would be to convince the druggist of the savings to be effected. It was problematical whether this could be accomplished entirely by advertising.

The garage market was of a type quite different from either of the other two new markets which the company contemplated entering. It consisted of a large number of small users who did not require the highest degree of purity in the distilled water which they used. The fact that many garages supplied distilled water gratis to their customers for filling batteries rendered them less likely to be willing to purchase high-grade equipment for that purpose than would have been the case if the equipment had been a direct revenue producer. The company properly decided not to risk trading down by putting out cheaper machines of lower quality.

In addition to the specific points already referred to, this case shows significantly the necessity for evaluating separately the various segments of an industrial market.[3]

October, 1927 M. T. C.

The advertising manager of the Chalders Manufacturing Company wrote the following rejoinder to the commentary on the case of that company:

We prefer to believe that the commentator has painted rather too dark a picture of our opportunities in the retail drug field. Let us say that a certain wholesale supply house or manufacturing druggist now supplying the retail druggist with his distilled water is using a still of about 50 gallons capacity an hour (not an uncommon size for the purpose), priced at $700. Suppose this wholesaler has been supplying 50 detail druggists, each of whom now orders a one-gallon-per-hour still, costing $37.50, $60.50, or $75.90, depending upon the type. All production and selling factors considered, 50 one-gallon stills are pretty certain to bring us in a substantially larger percentage of profit than one 50-gallon still. Comparisons of other sizes would show a somewhat simi-

[3] See also National Rock Drill Company (A), page 113; Exton Gear Company, page 56.

lar result, we believe. Furthermore, the wholesaler, during our lifetime, is certain to have at least *some* demand for distilled water, so that present wholesalers owning stills are not likely to dispose of them to other industries, and wholesale drug houses buying new stills probably would have to specify a fairly large size to take care of "peaks" in varying demand. In fact, no matter how widely the use of stills by retail druggists may spread, we suspect that wholesalers will continue to buy stills and that they will not be of much smaller size than those now employed—at least for a good many years to come.

Then, too, the retail drug store is somewhat of a community and "educational" center, and the druggists, by developing possible sidelines in their sale of distilled water produced in their own stills, might well cause quite a general increase in the consumption of distilled water. Our opinions are purely speculative, of course, and perhaps we are not entirely justified in our enthusiasm. In any event, it adds a little zest to business—even if we don't hear from the 52,320 retail drug companies in the United States.

Symbol Electric Company[1] (A)

MANUFACTURER—MOTORS AND WELDING EQUIPMENT

Distribution Channels—*Exclusive Distributors Utilized in Preference to Direct Sale.* It was the policy of the company, a manufacturer of motors and electrical welding units, to replace exclusive distributors with its own sales offices in any territory where the sales volume warranted such action. In the company's opinion, sales in the South, where the company was represented by exclusive distributors, had reached a volume sufficient to justify direct sales. However, buying habits in the South appeared to make continuance of the distributor plan advisable.

(1925)

The Symbol Electric Company, in 1925, was distributing its products through 16 branch offices located in large cities in the middle western and eastern sections of the United States. In the territories south of the Ohio River and west of the Mississippi-Missouri rivers, the company had appointed 8 distributors with exclusive territories. Sales of Symbol products by some of the distributors in the South had reached totals which caused Symbol Electric Company officials to consider the establishment of branch offices in those territories.

The two principal lines manufactured by the Symbol Electric Company were motors and electrical welding units. The company had begun the manufacture of electric motors prior to 1900 and in 1913 had developed electrical welding equipment. After the development of electrical arc welding in 1913 the company had made changes in the construction of its motors in order to employ the welding process in their manufacture. The motors then had special features which made them well fitted for use on motor driven machinery such as elevators and hoists, pumps, machine tools, and creamery equipment. The motors differed in construction from most motors manufactured by competitors and were specially adapted for mounting on direct motor driven machinery. They ranged in ratings from ½ to 150 horse power, and they ranged in price from $50 to $2,000, with a $200 motor as the most frequent sale. The company sold over 75% of its

[1] Fictitious name. See also Symbol Electric Company (B), (C), and (D), pages 241, 494, and 516, respectively.

motors through its branches to about 50 manufacturers of motor driven machinery, who mounted the motors as standard equipment for the machines. It sold the remaining 25% of the motors through its branches and distributors to factories, mills, repair shops, and dealers such as mill supply firms.

Electrical welding in 1913 had just passed from the experimental stages into practical application and there was need for considerable educational effort to convince potential customers of the advantages of electrical welding in the process of manufacturing iron and steel products. The Symbol arc welder possessed several special features which offered advantages over competing electric welders in convenience of handling by operators and amount of work it would accomplish in a given time. Electric arc welding was stated by the company to have advantages over combustion flame welding, because of greater heat, concentrated in a smaller area and produced at less cost.

The market for the electrical welding equipment was principally among manufacturers of iron and steel products who used the welding equipment in the process of manufacture. Almost 90% of the welding equipment was sold for use in manufacturing. The welding unit most frequently sold was priced at $1,000, although unit prices ranged from $500 to $30,000. The company followed a one-price policy for both its motors and welders. It did not offer quantity discounts.

The company at first had distributed its products entirely through machinery supply firms and electrical supply wholesalers to whom it granted exclusive territories. These distributors either had purchased Symbol products for stock or had accepted stocks shipped by the Symbol Electric Company on consignment. In order, however, to secure more intensive educational sales efforts and to render demonstration and service on welding equipment, the company after 1915 had adopted a policy of direct distribution through branches in the industrial sections which offered the greatest sales opportunities. It gradually had replaced with branches its exclusive distributors in the middle western and eastern industrial sections of the United States. The company, in 1919, had 10 branches with 2 salesmen at each branch. By 1926 it had for the same territory that had been covered by these 10 branches 36 salesmen and 16 branch offices, each office having from 1 to 6 salesmen, the number depending on the size and im-

portance of the territory. Each salesman represented both motors and welders.

In 1926 the company had 4 branch offices in the state of New York and 3 branch offices in Pennsylvania, for example. Even with this intensive coverage in the East and Middle West, officials of the company were of the opinion that parts of these industrial sections were not covered adequately and planned, as sales volume developed, to split further the territories of the larger branches. They deemed sales of $100,000 a year sufficient to support a branch with one salesman. Such a branch did not carry stocks. It usually consisted of a small office in an office building in the business section of the city. The office provided space for the desks of 1 or 2 salesmen, the desk of a secretary-stenographer, and a small exhibit of Symbol products. Officials of the company were of the opinion that a salesman located in such a sales branch in an industrial city could keep in touch with current business requirements, and could maintain sales and service contacts with customers and prospective customers more effectively than could a salesman sent to the territory from a distant branch.

After deciding to cover the northern industrial sections with branches, the company had not considered the use of exclusive distributors desirable in those territories. Machinery supply firms in the northern part of the United States usually stocked or represented several lines of machinery and did not give intensive sales efforts or service to any one line. Sale of welding equipment for use in manufacturing processes required educational sales effort which could be given best by salesmen of the company. It was the company's experience in those territories, moreover, that large manufacturing companies of the type which were prospective customers for welding equipment almost always wanted to buy directly from the manufacturer of the equipment rather than from dealers or representatives selling on commission.

Symbol sales branches sold, however, to mill supply firms, machinery dealers, and electrical repair shops which wished to purchase for resale. In each branch territory, therefore, there were a few distributors which stocked Symbol products, principally motors. Those distributors did not have exclusive territories and usually stocked or represented competing motors also. The Symbol Electric Company sold to these distributors outright or

shipped on consignment on agreement that the distributors purchase, sell, or return the motors within four months. Since salesmen of the Symbol Electric Company were not allowed to vary prices to customers, the distributors were able, if they wished to lower their profits on a sale, to undersell the Symbol Electric Company. Sales of Symbol products to other than machinery manufacturers constituted only a small percentage of total sales.

The company had appointed machinery supply firms as exclusive distributors in the Far West and South in order to get national representation, inasmuch as it had advertised from 1916 to 1924 in general publications of national circulation such as the *Saturday Evening Post* and the *Literary Digest*. In 1924 it had discontinued advertising in general publications and in 1925 had started advertising in technical trade papers which reached manufacturers of iron and steel products.

On sales of motors and equipment to consumers, the company allowed a discount of 15% from list prices. On sales of motors to manufacturers who resold the motors as a standard part of their products, the company quoted discounts of 20% and 5% from list prices. The exclusive distributors were expected to maintain these resale prices. The prices quoted exclusive distributors were 20% and 10% off the list prices. In addition, the company gave the exclusive distributors a bonus based on their sales volume of Symbol products. The bonus started at 2% on total annual sales over $5,000 and increased on a sliding scale to 14% on all sales over $100,000. The Symbol Electric Company did not have an exclusive agency contract form. Arrangements were verbal or by correspondence. The agreement usually outlined the territory, the terms of sale to the distributor, the promise of the distributor not to sell directly competing products, and the promise of the company to give the distributor credit for all sales in his territory and to send him any inquiries from within his territory. These agreements could be terminated at any time by either party. The prices quoted to supply firms which were not exclusive distributors but which purchased for resale were 20% and 5% off the list prices. These distributors also were eligible for the bonus.

The two principal competitors of the Symbol Electric Company were much larger than that company and manufactured complete lines of almost every electrical device or type of electrical equipment. These large companies had branches scattered

throughout the United States, and, in addition, sold some lines of products through electrical and machinery supply firms.

Since the Symbol Electric Company was convinced that much of its most promising territory in the East and North was still inadequately covered, it did not desire as yet to establish branches on the Pacific Coast or in the Far West, where prospective customers were few and distances great. It looked upon the few sales obtained through its distributors in the West as pure gain.

The situation in the South was somewhat different. Sales through the southern distributors had increased more rapidly than in the West. Industries connected with iron and steel products were developing in the South. The southern distributors as a rule sold a much wider range of equipment than did the supply firms in the North. The company's representative in New Orleans, for example, sold equipment ranging from lawn mowers, motor boats, and ship chandlery to sawmill, factory, and railroad equipment and machinery. Some of these products it carried in stock, others it accepted on consignment, and others it sold on commission from catalogs or on specification. This firm had ten branches in Louisiana, Mississippi, and Alabama. The four southern exclusive distributors of the Symbol Electric Company all carried the Symbol motors and welders in stock.

By 1925, annual sales of Symbol products by each of the four southern distributors exceeded $75,000 and one distributor's sales for the company were about $250,000. Had buying habits in the South been the same as in the North, the company would not have hesitated to displace the distributors and to establish branches in three or four of the cities in the territories covered by the distributors, inasmuch as those cities which yielded a satisfactory volume of sales through distributors should have yielded a much larger volume when direct, intensive sales efforts were applied. The company, at its own expense, had brought a representative of each of the southern distributors to its factory about once every two years in order to familiarize him with the products of the company. On several occasions it had sent a field engineer at the request of a distributor to help in selling and to give technical advice on some new application of the welding equipment. Although the representatives had become familiar with the products and could render fairly adequate services, they did not, as a rule, try aggressively to create new sales for the products.

Officials of the Symbol Electric Company had come to believe, through visits to the South and through experiences of other northern manufacturers who had established branches in the South, that buying habits for machinery and supplies were different there from those in the North. Sales were made to a large extent on a basis of personal friendship without so much regard to prices as in the North. Southern industrial concerns were not thought to be so responsive as northern concerns to intensive sales efforts, modern improvements, or savings through direct purchase. In the case of long-established supply firms, patronage and friendship motives were strong. Southern purchasers were thought to prefer buying from the southern dealers even at a higher cost to buying directly from a northern manufacturer.

This difference between buying habits and trade practice in the South and in northern states was the determining factor in the company's decision in 1926 not to establish branches in southern cities.

COMMENTARY: This case, similar to others upon which comments have been made, illustrates the difficulty of changing from the distribution of industrial products through exclusive distributors to a scheme of direct sale because of the danger of loss of patronage subject to change.[2] Although expressed only in the form of opinion based upon observation, the statements of the executives indicate that at the time of this problem the patronage which supply firms in southern territories attracted to themselves made a change to direct distribution more difficult than in the northern territories.

Direct selling was feasible for this company in a great many territories. The size of the unit sales, the number of prospects and the potential sales volume in industrial communities, the need of installation and service advice and technical knowledge on the part of salesmen, all supported a program of direct selling.

Although the technical character of the products and the need of installation advice and service favored direct selling, it was feasible to sell these products through distributors, although not entirely satisfactory. With the growth in knowledge on the part of manufacturers of the use of motors and welders, and with the growth of a force of operators and repair men who could handle and repair the products, the service problem became less, and hence the difficulties of selling through distributors were reduced. The greater aggressiveness possible

[2] See Stetlow-Carroll Company, 3 H.B.R. 37; Radams Chemical Company, page 134; Paley Truck Company, page 252; Cathron Company, page 194.

under a plan of direct selling and the growth of industrial communities in the South led to the belief that the conditions which influenced the executives to retain exclusive representatives would be only of limited duration, and that the establishment of branches and direct distribution in southern industrial communities probably would become desirable.

Although this case does not give detailed data which make it possible to determine what the company considered basic factors governing the establishing of branch offices, the following apparently were important considerations:

1. Generally speaking, it appeared to be better to have a salesman or salesmen with headquarters in an industrial center rather than to have a salesman cover such a territory from a distant headquarters. By being upon the ground the salesman was better able to keep in touch with customers' needs and with developments which might affect sales within the territory. Accordingly, when the potential sales within a territory reached approximately the $100,000 point, it was worth while for the company to consider the establishment of a branch office.

2. The expense of setting up a branch office was apparently small, requiring only a rental of small office space and perhaps stenographic help.

3. In those parts of the country where prospects were few and potential sales were small, the company found it advisable to sell through exclusive distributors in spite of the technical character of the products and the service requirements. Thereby the company was enabled to obtain national distribution in conformance with the promotion carried on through advertising mediums of national circulation.

July, 1926 N. H. B.

Strength Union Company[1] (A)

MANUFACTURER—PIPE-FITTING SPECIALTIES

MARKET COVERAGE—*Change from Exclusive to Selected Distributors.* The company manufactured a line of pipe-fitting specialties which, because of their distinctive features, it had been able, through its advertising, to market on other than a strictly price basis. At first the company distributed its products through supply firms to which it granted exclusive territories. Because this plan appeared to curtail sales, the company decided to adopt a plan of selected distribution. The company had not adopted a plan of dense distribution chiefly because of the danger of drastic price cutting.

(1925)

The Strength Union Company, in 1925, judged that modifications in its distribution policies might be advisable. At that time the company was distributing its pipe-fitting specialties through selected supply firms. Those selected distributors did not hold exclusive agencies, but the company protected them against other dealers, to whom it sold upon request, by allowing the selected distributors a larger discount than it allowed other firms.

During the first few years after it was organized, in 1900, the company's sales, which then amounted to less than $10,000 a year, were confined to the vicinity of New York. Later the company achieved national distribution, and, in 1925, sales were more than $750,000.

The company had concentrated upon a few high-grade pipe-fitting specialties, especially upon a branded pipe union, the patented features of which made it superior for use on steam pipe lines, high-pressure pipe lines, and pipe lines in oil fields. In 1910 the company had begun to advertise its branded products with full pages in trade papers reaching engineers, steam fitters, and master plumbers in the power, railroad, and oil industries. The products had gained wide recognition for their high quality and thus had been taken out of the purely competitive price class. The company did not offer a complete line of pipe fittings. There were three large companies in the United States which did have complete lines of pipe and pipe fittings. Those

[1] Fictitious name. See also Strength Union Company (B) and (C), pages 297 and 372, respectively.

companies had sales branches throughout the country, and in almost every city the complete line of fittings of each firm was stocked by at least one supply firm.

When it had begun to distribute its specialties widely, the company had granted exclusive territories to supply firms in most areas. Individual bargaining with supply firms, however, had resulted in varying types of arrangements and discounts. As the reputation of its products grew, the company had concluded that its sales possibilities were limited by the exclusive arrangements. It accordingly had terminated these arrangements gradually, and in each territory had selected several distributors for its products. These distributors were steam fitters' and plumbers' supply firms and oil industries' supply firms. Mill supply firms which furnished industrial companies with such supplies as belting and small tools ordinarily did not stock pipe fittings. A supply firm ordinarily stocked only one brand of heavy pipe fittings, although it might take orders for other brands if its customers insisted.

The largest market for the company's specialties was in the oil, power, and railroad fields. The specialties were of heavy construction, and, ordinarily, lighter and cheaper pipe fittings would serve domestic purposes equally as well. The Strength Union Company had secured distribution in the oil fields through one large supply firm which had branches in all the principal oil districts. A few railroads which used Strength unions usually purchased the goods directly from the company to keep up their stocks for replacement and repair purposes. Most power houses and large industrial companies, such as steel mills, also kept small stocks of pipe fittings on hand for repairs and replacements. These supplies they purchased from local supply firms. Any new construction work, extensive alteration, or repair work usually was let out on contract by the power and industrial companies to steam fitting and plumbing contractors. These contractors purchased their materials, both for particular jobs and for the small stocks which they carried, from supply firms. Each contractor ordinarily purchased from only one supply firm. In many instances the supply firms partially financed contractors' operations by extending credit for materials until after the jobs were completed and the contractors had received their pay. An industrial company or power company in purchasing fittings directly from a supply firm sometimes confined its purchases to

one source, but in most instances it purchased from the supply firm which gave the lowest prices or the promptest delivery. Although the purchasing agents employed by the industrial and power companies placed the orders, they usually were influenced materially in the selection of brands by the preferences or specifications of the power engineers or master plumbers employed by the same companies. The company had no definite information regarding the proportion of its products used in new construction, but it estimated roughly that 50% of the unions went into new construction and 50% into repair and replacement work.

The Strength Union Company in 1925 had three salesmen who visited its distributors to take orders and to maintain cordial relations. They did some missionary work by calling on large contractors and users to encourage them to order Strength unions and pipe fittings through the distributors. Salesmen visited each distributor once or twice a year. Between salesmen's visits, the selected distributors sent in orders without solicitation by salesmen. These reorders amounted to almost 60% of the company's total annual sales. The total sales expense, including advertising and freight, amounted usually to 10% of sales; the salaries and traveling expenses of salesmen amounted to about 3% of sales.

In every city there were several supply firms, of varying degrees of size and responsibility, which stocked steam fittings. Usually in cities of over 50,000 population there were 3 or more well-established supply firms with large patronage, competent sales organizations, and adequate storage and delivery facilities. Some large supply firms had branches in several cities and towns. In addition to these well-established supply firms, there were usually a large number of smaller firms. These often were operated by men who had been salesmen of large distributing or manufacturing companies and who, on securing some capital, had started their own businesses and attempted to take over their former customers. They sometimes specialized in selling particular articles or brands. In other instances, steam fitters or plumbing contractors carried on the supply business in addition to their contract work. These small distributors, with their small sales organizations, small stocks, and perhaps inadequate accounting records, frequently cut prices.

Officials of the Strength Union Company asserted that the number of small distributors had increased rapidly in the 10

years prior to 1925. Newly established dealers who previously had been salesmen for distributors of the Strength Union products frequently asked to be allowed to stock the Strength Union line on the same terms as the large distributors. The company usually had refused these requests, fearing that to comply would bring about price competition on Strength Union products.

The experience of the company in shifting from distribution by exclusive distributors to less restricted distribution indicated that competitive conditions in each city and the character of the management of supply firms were important factors in the development of the sales policy. In one large eastern city, for example, a large supply firm had held the exclusive agency for Strength Union products for over 10 years. This distributor was the leading supply firm in the city; it was aggressive in salesmanship, maintained the resale prices, sold the Strength Union products on a quality basis, and secured an annual sales volume for the products which was believed to be greater than the company could secure by selling to several supply firms.

In other cities, however, the company had experienced large increases in sales when it discontinued the exclusive arrangements and selected one or two additional, well-established supply firms in each city to stock its line. The high reputation of Strength Union products had enabled the company readily to secure reputable distributors to stock the products without exclusive territorial rights. In one large middle western city, however, the use of numerous distributors had resulted disastrously. The company had discontinued its exclusive arrangement and had sold on its usual terms to all distributors who requested stocks. Sales at first had increased, but after two years the prevalence of serious price-cutting competition in Strength Union products in that city made the line unprofitable to all dealers. The dealers had become dissatisfied and had begun to substitute competing lines. By limiting its sales on wholesale terms to two selected distributors in the city, the company had succeeded in changing the situation so that prices were maintained at a level profitable to the distributors, and the sales volume for the city again had become normal.

The company granted the same discount to all its selected distributors regardless of quantities purchased. At one time it had established a sliding scale of quantity discounts to distributors. This practice had been discontinued, however, because it was

thought to encourage price cutting; the dealers tended to pass the extra discount on to their customers. The company decided, moreover, that it was unwise to place its small distributors at a competitive disadvantage through quantity discounts. The small, local firms were important in distribution because they could make immediate delivery in their territories and because in small cities personal friendship and local financing through credit extension were important elements in the trade. The company frequently received substantial orders from supply firms which regularly stocked competing lines. On such orders, the company allowed a smaller discount than it gave its selected distributors.

By 1925, the manufacturers of competing brands of heavy pipe fittings had developed products which were of practically equal merit with Strength Union products. The competing companies also were advertising extensively in trade papers. The Strength Union Company had made no outstanding improvements in the products, and, although the company still emphasized their special features, those features had become less effective in distinguishing Strength Union products from competing products. The patents, moreover, had expired. The officials of the company noticed, in 1925, that price cutting on Strength Union products was becoming more prevalent and that competition on a price basis with other heavy pipe fittings was becoming more intense.

COMMENTARY: While all pertinent facts concerning the buying habits and buying motives of consumers which would help to determine the best distributive methods were unknown to the officials of the company, this case apparently raises issues similar in many respects to those of a manufacturer of consumer goods who is trying to determine whether to market his product as a specialty article, through exclusive agents or selected retailers, or as a convenience article, through as many retailers as possible.[2] It is well to note first the relative advantages and disadvantages of trying to market the Strength Union Company's products as specialties with restricted distribution.

Sale of a product as a specialty good through exclusive agents or selected dealers ordinarily connotes, among other considerations, presence of two conditions. First is the presence of qualities in the product which appeal to strong buying motives of the consumer, leading him to seek out a particular brand. The second condition, closely allied to the

[2] See Mersey Appliance Company, 3 H.B.R. 50; Lee Shirt and Collar Company, 3 H.B.R. 80; Dartmore Pen Company, 3 H.B.R. 326; and others.

first, is a high unit value which makes it worth while for the consumer to give mature consideration to his purchase and worth while for the dealer to use aggressive efforts to sell the article. Sale through exclusive agents or exclusive dealers rests on the theory that consumers will seek out the dealer for the particular product, or that the dealer, because he is given important privileges in distribution, will seek out most of the possible consumers for the products.

The Strength Union Company elected, when it started its campaign of advertising, to merchandise its products as specialties, using exclusive agents. After a time, however, it found it advisable in most instances to change from the use of exclusive agencies to the use of a larger number of dealers. There were several reasons for this change. Although the union, the chief product of the company, was a specialized article of high merit which, through advertising and sales promotion, had gained a brand recognition, it was not enough superior to competing products to lead numerous consumers to demand it or seek it elsewhere when distributors which these consumers patronized regularly did not have it in stock. In other words, the product or the need which it filled was not of sufficient consequence in the eyes of many consumers to lead them to seek it out when it was not readily available through usual sources of supply. The patronage which any one supply firm attracted was limited. While industrial concerns and power houses were inclined to shop about among supply firms for more favorable prices, much business for this type of article was influenced largely by the patronage which each supply house was able to attract to itself. This regular patronage probably applied especially to small orders for repair work. On large purchases for installations, the purchaser might be more inclined to seek out the dealer who would give him the best terms or to seek the brand which would best meet his needs. Supply houses which handled a multiplicity of articles were not ordinarily in a position to give much attention to the promotion of this article of relatively low unit value, especially for small sales for repair work, although they might seek out large contracts.

The combination of these facts, that numerous consumers were willing to substitute competing products, that any one supply house could attract only a limited patronage, and that supply houses could not be counted on regularly to sell aggressively, clearly indicates that distribution as a specialty through exclusive agencies was not the type of distribution which would bring largest sales for the product. Provided dealers could have been induced not to cut prices and thereby trade on the brand reputation to its detriment, the ideal form of distribution would appear to have been intensive distribution. Drawing an analogy to the field of consumers' goods, we may say that the products of this company were more analogous to convenience goods than

to specialty goods. Convenience goods call for intensive distribution.

The practical difficulty which the company faced, however, in maintaining prices probably justified it in using a scheme of selected distributors. Whenever complete distribution was attempted, destructive price competition appeared. The company was trying to promote the sale of its product on buying motives other than economy in purchase.[3] As is usual, flagrant price cutting discouraged dealers and harmed distribution. Under such conditions, as a matter of expediency, the use of selected dealers who would cooperate with the company in promoting the product on the basis which the company desired to follow appears to have been sound. If the company, however, could have avoided destructive price cutting, more intensive distribution should have been sought. Failure to make the product available through numerous supply firms, tended to reduce the opportunities for sales.

The company faced another problem which the manufacturer of every branded convenience article faces; namely, that of inducing distributors to handle his particular brand in addition to competing brands. Some supply houses stocked full lines of fittings of large competitors. Consistent advertising and stressing of the merit of the Strength Union Company products had to be relied upon to lead consumers to prefer them so that when the dealer carried more than one brand the consumer would be inclined to accept the Strength Union Company brand. The evidence indicates that in numerous cases the advertising and other promotional work had succeeded in leading some supply firms to stock Strength Union Company products in addition to their usual line of pipe fittings even in the face of a price differential.

By 1925 the expiration of the patents on its union and other specialties placed the company in a weaker competitive position than it had occupied formerly. The distinguishing characteristics which made its unions preferred beyond competing unions were being adopted by other manufacturers. This meant that substitution by dealers was becoming easier and that the Strength Union Company's products were having to compete with similar products more upon a price basis. As the products became relatively more subject to direct competition, it was probably true that it was becoming increasingly hard to get dealers to stock more than one brand. Under such circumstances it would have been advisable for the company to seek new specialties which would induce supply houses to stock its products. Otherwise the company would have to expect to lose the opportunities for aggressive merchandising which it had been enjoying.

June, 1926 N. H. B.

[3] See Melvin T. Copeland, "Standardized Resale Prices." *Harvard Business Review*, July, 1926.

Raeburn Electric Company[1]

MANUFACTURER—ELECTRIC WIRING EQUIPMENT

Distribution Channels—*Direct Sale Utilized in Preference to Distributors.* The growth in the market for electric switches, sockets, and wiring devices among manufacturers using them as fabricating parts led the company, a manufacturer of such items, to consider the advisability of selling directly in this market. Its distributors had almost no part in making sales to manufacturers using the goods as fabricating parts, but the company customarily filled all orders through them, allowing them their full discount, in order to hold their goodwill.

Market Coverage—*Change from Selected to Dense Distribution.* For several years the company, a manufacturer of electric switches, sockets, and wiring devices, had been increasing the number of electrical supply wholesalers acting as distributors for its line; previously the company had sold to a relatively small number of selected distributors. In 1928 the company decided, as a general policy, to sell to as many reputable electrical supply wholesalers as possible without serious overlapping of territories.

(1928)

The Raeburn Electric Company was a large manufacturer of electric switches, sockets, and all kinds of wiring devices. Its products were of high quality and never had been sold on a price basis. The main markets for these products were among electrical and building contractors, contractor-dealers, power plants, and manufacturers who incorporated the products in their own goods. This latter group included manufacturers of such items as lamps, electric cleaners, toasters, and washing machines. For many years the Raeburn Electric Company had handled practically all its sales through wholesalers of electrical goods. In 1928 it was proposed, however, that the company should sell directly to manufacturers who used its goods as fabricating parts. A further question also presented itself at this time. That question was whether the company should increase the number of wholesalers to whom it was selling its products.

Originally, the company had sold its goods to none but the largest wholesalers of electrical supplies. Each distributor had been required to carry a total stock of not less than $100,000; to place a stock order for Raeburn merchandise of from $2,000

[1] Fictitious name.

to $5,000; to issue a catalog; and to maintain a staff of traveling salesmen. The territory of each distributor had been large, and all sales in the territory had been credited to the distributor. An electrical supply wholesaler carried practically all kinds of electrical supplies and equipment including, in addition to such items as switches and wiring devices, goods such as table and floor lamps and washing machines.

About 1924 the company had begun to increase the number of its distributors. There was at the time a tendency for the distributors to buy in smaller quantities and more frequently than they previously had done. The general manager of sales stated that the distributors placed three orders where previously they would have placed one. Competition among the manufacturers, moreover, had grown constantly keener as new firms entered the field. The number of wholesalers also had increased greatly, and new distributors continually were asking for the Raeburn line.

For several years prior to 1924 there had been approximately 300 distributors for the Raeburn line. In 1924 the company added 10 distributors; in 1925 it added 18; in 1926 it added 33; and in 1927 it added 43. This rate of increase in number of distributors was far in excess of the rate of increase in sales. Nevertheless, in each district where it had increased the number of distributors, not only total sales for the district but also sales of the original distributors had increased. In 1926, for example, the company had increased the number of its distributors in Pittsburgh from 3 to 5, and sales of the 3 original distributors had shown gains in the following year. At the beginning of 1927 the company increased the number of its Denver distributors from 4 to 7, and in 1927 sales of Raeburn products in Denver were larger than in any previous year. A large part of the sales increases in these territories, the executives believed, could be ascribed directly to the increases in number of distributors; the company had not increased its own sales work in the territories materially following the increases made in number of distributors.

The company's original distributors opposed these additions of new distributors to their number. The argument that the company used in its dealings with its original distributors was that the wholesale firms which were asking for the Raeburn line would take on another line if that line was refused them, and that

this competition from a different line would be more serious to the original distributors than competition on the same line.

In 1928 there were 400 distributors selling the Raeburn line. At that time the company estimated that there were in the United States from 900 to 1,000 wholesale firms suitable for selling its goods. The question was whether the company should seek to have the 500 to 600 additional firms distribute its products. The company had tried to have its distributors carry only the Raeburn line of switches and wiring supplies. Of the 400 distributors, 100 carried no competing line. The other 300 carried one or more competing lines but treated the Raeburn goods as the main line.

All orders, except in a few special cases, even when obtained directly by the company, were filled through the distributors. All distributors received the same discount from list prices to users. There were no quantity discounts; prices, however, were relatively higher for purchases in less-than-standard packages. A distributor's gross margin, if he bought in standard packages and sold in less-than-standard packages at the company's list prices, was 35%. If he bought in standard packages and sold in standard packages, his gross margin was 22½%. If he bought in less-than-standard packages and resold in standard packages, his gross margin was 10%. The company had not found that the increase in the number of its distributors had led to increased price cutting, nor had price cutting proved a serious problem, except in metropolitan New York.

The company operated five sales branches; it carried stocks, however, at only three points. The company, in 1928, was employing 34 salesmen. These men were paid on a straight salary basis. At one time the company had paid its salesmen commissions but that plan had been discarded as unsatisfactory. The sales manager stated that under the commission plan the salesmen built up their commissions to a point that satisfied them and then ceased to work for further increases—failing to consider the company's interest. The company until 1927 also had paid its salesmen bonuses based on the salesmen's performance and the earnings of the company. The bonuses had been discontinued because of the dissatisfaction caused when no bonuses or small bonuses were paid in one year after large bonuses had been paid in a previous year.

The company's salesmen called on distributors and also on

contractors, architects, and manufacturing users to secure orders for the distributors' accounts. The general sales manager stated, in 1928, that approximately 33 1/3% of the orders placed by the distributors were obtained for them by the company's salesmen. The wholesalers, he stated, in a majority of instances were little more than order-takers with small stocks. The proportion of orders for which the salesmen were responsible was constantly increasing. In the five years prior to 1928 the company had added six men to its sales force. The salesmen were required to report each call. The company maintained records showing the number and amount of orders secured by each salesman for the wholesalers' accounts and the number and amount of orders received from the wholesalers.

One reason for the increase in the portion of the business obtained by the salesmen, according to the sales manager, was the increase which had taken place in the manufacture of goods requiring switches, sockets, and wiring devices as fabricating parts, In 1928 this market, the sales manager stated, represented 40% of the total potential market for Raeburn products.

A substantial part of the Raeburn goods sold to manufacturers was special, made to order upon plans worked out jointly by Raeburn salesmen and the purchasers. Such goods, of course, could not be carried in stock by the distributors, nor did the distributors, as a rule, have any part in making the sales. Nevertheless, it was the company's practice, with some exceptions, to fill such orders through its distributors. The company's customers sometimes objected to this practice, contending that they and not the distributors should have the advantage of whatever discount was given, especially in view of the size of their orders, which usually were larger than the customary orders placed by distributors. Some manufacturers buying Raeburn products, however, had reciprocal relations with the electrical supply wholesalers whereby they purchased their electrical equipment from the wholesalers and the wholesalers in turn purchased the manufacturers' completed products for resale.

The general sales manager pointed out that the company was largely dependent for distribution upon the wholesalers. It was the large volume production of certain standard items, on which the company's gross margin was relatively small, that made possible the production of the special and more profitable items, he

stated, and for selling those standard items the wholesalers were indispensable. One of the important markets for the standard items, for example, was among contractor-dealers, of which there were in the United States about 22,500; the company could not expect to cover that market directly. Quick delivery was important in the sale of the standard items, the sales manager stated.

The Raeburn Electric Company was a consistent advertiser in trade papers. It also circularized 27,000 actual and prospective customers monthly.

The company decided, as a general policy, to undertake to sell to as many reputable electrical supply wholesalers as possible; the territories would be watched carefully, however, to avoid duplication of effort. No decision had been reached as to the proposal to sell directly to manufacturers, but the sales manager gave it as his opinion that within five years that policy would be in operation.

COMMENTARY: The course followed by the Raeburn Electric Company in increasing the number of distributors to whom it sold switches and wiring devices was proving successful. The chief danger involved in this course was that it would lead to demoralizing price cutting.[2] That danger had been avoided thus far by the company, however, by the exercise of care in choosing the distributors to whom sales were to be made.

The increases in the number of distributors enabled the company to improve its coverage of the potential market for switches and wiring devices among contractor-dealers and other small retailers. The number of contractor-dealers and other retailers who were potential purchasers of Raeburn products was large, and the increased number of wholesale distributors furnished greater likelihood that the patronage of all these contractors and retailers would be solicited. The merchandise did not lend itself to concentrated specialty selling by wholesalers. The company hardly could hope for more than preferential order taking by the wholesalers' salesmen. Hence the services of numerous wholesalers were needed for adequately covering the market among contractor-dealers and other retailers.

The company was following an unusual course, but a safe one, in attempting to secure intensive retail distribution through a limited number of wholesalers. As the company's plan was working out, the task seemed to be to determine the minimum number of wholesalers through whose efforts the maximum retail distribution could be secured. Lim-

[2] See Strength Union Company (A), page 166.

itation on the number of wholesalers would check price cutting competition on the line and thereby stimulate a preferential interest among the wholesalers.

The problem of handling the sales of the company's products to other manufacturers for fabricating purposes presented perplexities. On the one hand, the company needed to retain the goodwill of the wholesalers who carried its line, in order to maintain a large volume of sales of the standard products. On the other hand, the wholesalers' services usually were not needed in selling to fabricators. The Raeburn Electric Company's salesmen solicited the orders and direct deliveries were made. The orders placed by the fabricators were as large as many of the orders placed by wholesalers. Thus the discounts allowed to the wholesalers on these orders were pure gratuities. Furthermore, since the orders from the fabricators usually were for special goods and their solicitation required technical sales service, there was no possibility that the business ultimately would be taken over by the wholesalers.

The wholesalers rendered no service in selling the special-order merchandise to fabricators; nevertheless, they received their full discount on the sales. The purpose of this concession by the Raeburn Electric Company was to retain the goodwill of the wholesalers, but the effect was to increase the company's costs heavily. The ultimate effect, if the practice were continued, inevitably would be to handicap the company in securing orders from fabricators, if the whole burden of the wholesalers' discounts were levied on those orders, or in selling the standard lines, if a part of the burden were shifted to them. A company cannot permanently compete profitably with other manufacturers if it includes in its costs payments for services not rendered.[3]

The company estimated that the market for fabricating parts amounted to 40% of its potential market. Hence that market was not to be dealt with lightly. The opinion of the sales manager that eventually the company would be handling its sales to fabricators independently of the wholesalers was sound in principle. The company had two distinct markets, which called for segregated sales methods.[4]

February, 1928 M. T. C.

[3] See Frame Wire Company, page 142.

[4] See National Rock Drill Company (A), page 113, and others.

Nobel Chain Company[1]

MANUFACTURER—ROLLER CHAINS

Market Coverage—*Change from Selected to Dense Distribution.* The company, a manufacturer of silent and steel roller chains, had developed a substantial volume of sales for replacements in automobile motors. To cover this market the company originally selected between 20 and 25 distributors. Later, chiefly because of increased competition, the company increased the number of its distributors to 150. Still later, in order to secure more adequate market coverage, it was decided to increase the number to 500 or 600.

(1928)

In the eight or nine years prior to 1928, the Nobel Chain Company, a large manufacturer of high-grade silent and steel roller chains, had developed sales for replacements in automobile motors to a point where that part of the business represented 25% of the total volume. Late in 1927 it was proposed that the company, in order to secure more complete market coverage, should increase the number of distributors to whom it sold its chains for the automotive replacement market from 150 to 500 or 600.

The company regarded its business, from the standpoint of sales, as divided into three parts, each of which it handled in a different way. One part was represented by sales to automobile manufacturers and manufacturers of automobile motors; another by sales to other manufacturers, either for fabricating parts or for plant equipment; and the other by the replacement sales in the automotive market. In each of the principal industrial cities in the United States the company maintained a sales office. No stocks were carried at these offices. They served merely as headquarters for the company's 15 salesmen.

The company's sales to automobile manufacturers or manufacturers of automobile motors made up about 50% of the total business. Those manufacturers used the chains as original equipment in the motors of the automobiles. To those users the company sold directly by means of three or four salesmen. The salesmen, who themselves were engineers, worked with the engineers in the purchasers' organizations to develop chains suitable

[1] Fictitious name.

for the particular circumstances under which they were to be used. The company directed little advertising to automobile manufacturers. Selling in that field, in the executives' opinion, had to be done entirely by personal solicitation. The company's salesmen for the automobile market did not call on firms other than automobile manufacturers or manufacturers of motors for automobiles.

About 25% of the company's sales were of chains to be used as fabricating parts in machine tools, as fabricating parts in trucks and road machinery with chain drives, or as equipment for power transmission in factories. The problems presented by these three types of sales were deemed sufficiently similar to warrant use of the same salesman for making them: there were 11 or 12 salesmen for this market. In addition to its own salesmen, the company was represented in this market by selected machinery supply firms.

The machinery supply firms carried stocks of Nobel standard chains and thus made it unnecessary for the company to carry stocks at its branch offices. The supply firms did not have exclusive sales territories, but the company sold to only one supply firm in a given territory. The average stock of Nobel chains carried by a supply firm amounted to from $1,200 to $1,500. The company's salesmen for this market called on users in the distributors' territories and took orders when possible. If immediate delivery was not required, shipment was made from the factory. If immediate shipment was required, however, the order was given to the nearest distributor. The company's prices to users and the distributors' prices were the same. It sometimes happened that a manufacturer objected to having his order turned over to a distributor, even when he wished immediate delivery. The manufacturer might insist that he should be given the same price that the company gave its distributors. Such demands were infrequent, however, and each was settled on its own merits. If an order was shipped from a distributor's stock and the purchaser was allowed the distributor's discount, the company gave the distributor a commission. The general sales manager stated that disputes seldom arose between the company's salesmen and the distributors' salesmen as to who should receive any particular order.

In selling its chains for power transmission in factories, the

company made a special effort to sell to firms building new plants or expanding old ones. The company kept itself informed of all current building projects. Its salesmen visited the construction engineers, who often let the contracts for the entire plant equipment, and also the executives of the firms for which the building was being done. Not only did the company's salesmen seek to convince the engineers and owners that Nobel chains were superior to other chains, but, inasmuch as chains were used with direct drives, the salesmen also emphasized the merits of having a plant equipped with direct drives rather than with belt drives. Sales of chains for equipping a single new plant sometimes amounted to $12,000 or $15,000. The company advertised extensively in trade papers reaching plant engineers, power house foremen, and other factory executives.

In the automotive replacement market, which took 25% of the company's total volume, the company, in 1927, was selling to 150 automobile accessory and replacement parts wholesalers. The company was doing no missionary work for those distributors. It did, however, advertise in trade papers read by garage men and automobile dealers. It also circularized an extensive list of garages and service stations once every three months. The company stressed the durability, quietness, and smooth action of its chains. Use of consumer advertising had been suggested to the company, but the sales manager was confident that for the company's product advertising in a general magazine of national circulation would be far more costly than the results would warrant.

Prior to about 1920, garages and automobile service stations requiring chains for replacements in the motors of automobiles secured them from the manufacturers of the automobiles or their representatives, so that a worn-out chain of one make was replaced with a new chain of the same make. At that time it had appeared to the general sales manager of the Nobel Chain Company that there was an opportunity for a chain manufacturer to develop a market for replacements among automobile dealers and service stations; that it was not necessary that a chain of one make should be replaced with a chain of the same make. At that time the company's chains were original equipment on several leading makes of automobiles.

As an initial step in developing the replacement market, the

company had employed four missionary salesmen to travel throughout the United States visiting every dealer and service station for one high-priced make of motor car. These four men were to explain the merits of Nobel chains and to secure trial orders. The chains were sold for about $10 each. In slightly more than one year, the company had sold 100,000 of these chains to dealers and service stations for this one make of automobile.

When this initial missionary work had been completed, the company undertook to secure distributors for its chains. As distributors the company selected between 20 and 25 large automobile accessory and replacement parts wholesalers located in the principal cities. Each of these 20 or 25 distributors carried not less than $3,000 worth of Nobel chains in stock. The distributors had salesmen who called upon garages and service stations and upon smaller wholesalers in their territories. Average Nobel chain sales of a distributor amounted to between $18,000 and $20,000 a year. The distributors did not have exclusive territories and received no commission on any sales that were made directly by the company; the company did not have salesmen calling on users, but some orders were received by mail as a result of the company's advertising and of previous sales. The discount allowed the distributors was 40% to 50% of the price to garages and service stations, which were looked upon by the company as the users. In reselling to other distributors the company's selected distributors usually offered a discount of about 33 1/3%, and on any sales which it made directly the company did not allow the secondary distributors a larger discount.

The company had continued to sell to its few selected distributors until about 1925. During the preceding three or four years competition for the replacement business had grown constantly keener. Several competing manufacturers had begun to offer wholesalers to whom the Nobel Chain Company's distributors were selling as large a discount as the company was giving its 20 or 25 key distributors. Most of the competing chains were less expensive than Nobel chains.

The general sales manager of the Nobel Chain Company decided, in 1925, that it was advisable for the company to increase the number of distributors to whom it allowed its maximum discount. Accordingly, in the next 18 months the number of such distributors was increased from 20 or 25 to 150. This gave

the company a distributor in approximately every town of 25,000 or more automobile population. In increasing the number of distributors the company had maintained amicable relations with its original distributors by explaining to them that unless the smaller distributors were allowed the maximum discount it would be impossible to hold their business in view of the larger discounts being offered by competitors.

Late in 1927 a further substantial increase was proposed in the number of distributors to be given the maximum discount. According to the new plan the company would have between 500 and 600 such distributors. Each distributor would be expected to serve merely his own town and adjacent villages. There would be no exclusive agency arrangements. A majority of the distributors of this type would have ratings of about $10,000 instead of ratings of $30,000 or $35,000 as was the case with the 150 distributors.

The general sales manager deemed this step necessary if the small garage was to be reached. There were, he stated, three types of "users": small garages; general service stations; and service stations specializing on one make of automobile. The proposed increase in number of distributors was aimed particularly at securing the business of the small garages. Those garages, the sales manager stated, had little capital and would not carry stocks. Neither would they order in advance. When an automobile owner brought his automobile in to have a new chain put in the motor, the little garage owner went to the nearest automotive supply firm to obtain the chain, paying for it over the counter. If that supply firm did not have a Nobel chain, the garage man would take another; and the supply firm would not be selling Nobel chains if it could get a larger gross margin on another make of chain. The automobile owner, the sales manager stated further, frequently shopped about before leaving his car at a garage to be fixed. He would inquire for quotations on the job at several garages and have the work done at the garage offering the lowest price. These same statements were true in a less degree of the general service stations.

The chief argument which the company saw against the proposal was the possibility that with the restriction of territories no distributor would be enthusiastic about selling the line. The company decided, however, to increase the number of its distrib-

utors as proposed. This increase was to be carried out in one area at a time, so that the results of the change could be observed in one place before the plan was made general. Each distributor selected was expected to carry in stock $200 or $300 worth of Nobel chains. The company assisted the distributors to select an assortment of chains that would permit them a rapid rate of stock-turn. The company decided to employ one man to call on distributors east of the Rocky Mountains except in the immediate vicinity of the branch offices; those localities would be covered by the salesmen from the branches whose primary duty was to visit manufacturing plants and the machinery supply firms that represented the company. In general, each distributor would be visited twice a year. All billings and credits and collections would be handled centrally, at the company's main office.

COMMENTARY: The Nobel Chain Company had shown a clear perception of its elementary marketing problem by segregating its market into three parts, each of which was being handled by methods especially suited to that type of market. This segregation is worth noting specifically because of the fact that so many contemporary manufacturers of industrial goods had not recognized the need for such action in dealing with analogous situations.

One segment of the company's market comprised manufacturers of automobile motors and manufacturers of automobiles. That trade was handled by sales engineers, who were equipped for rendering technical sales service. Another segment of the market included manufacturers of machine tools, manufacturers of trucks and road machinery with chain drives, and plants using chains for power transmission. That trade was handled by selected supply firms, with the assistance of missionary salesmen. Especial attention was given to stimulating sales on new construction projects.[2] The third segment of the market included repair shops and garages which bought chains for replacements in automobile motors. It was with this third segment of the company's market that the immediate problem was concerned.

The company apparently was convinced that it was losing potential sales in the replacement market because of inadequate coverage. In increasing the number of wholesalers to whom it sold chains for replacement purposes, the company was pursuing a logical course. In 1920, when it had reached the conclusion that the increased use of automobiles was resulting in a sufficient volume of replacement demand

[2] It is to be noted that this company seemed to have handled this problem more effectively than the Erven Leather Products Company had dealt with a similar problem. See page 3.

for chains, it had sent missionary salesmen into the field to secure orders from garages where repairs were made. These orders constituted evidence that a demand existed and made it possible to induce a group of leading wholesalers to add chains to their lines. As the demand continued to increase and as competition for the business became keener, the need for more intensive wholesale distribution was recognized. This led naturally to the company's decisions of 1925 and 1927.

The need for intensive wholesale distribution for this product can be attributed to the character of the demand. Nobel chains could be used for replacement purposes on many makes of automobiles. Hence, practically every repair shop was a potential user. It was not to be expected, however, that each repair shop would carry a reserve stock of such chains, for the shop could not know when a demand for a particular size or type of chain would occur. Hence the shop looked to a wholesaler carrying replacement parts to be able to supply its needs immediately when occasion arose. The demand was sporadic and the Nobel Chain Company could secure a maximum volume of sales for replacement purposes by having its chains carried in stock by all reputable wholesalers who had any substantial volume of replacement sales. Otherwise, substitutes would be sold by the wholesalers. This type of wholesale distribution was needed to enable the company to reap the full returns of its advertising program.

February, 1928 M. T. C.

Wiremold Company

MANUFACTURER—WIRING CONDUITS

Market Coverage—*Use of Plan of Dense Distribution.* The company, which manufactured a conduit system and fittings for surface wiring, decided to secure as many desirable wholesale distributors for its products as possible. The company would give distributors' prices, however, only to those wholesale firms which carried specified quantities of its goods in stock.

(1928)

The Wiremold Company manufactured and sold under a registered trade name a patented conduit system and fittings for surface wiring. The Wiremold conduit system originally had been developed for extension wiring, when the main wiring system had been installed behind walls and under flooring. The Wiremold system had come to be used, however, for all the surface electric wiring in many factories, warehouses, department stores, office buildings, school buildings, hospitals, and so on. Wiremold wiring conduits and fittings were so constructed and painted as to present a neat and unostentatious appearance. There were 84 items of fittings in the Wiremold line. Wiremold surface conduits competed with wood moulding, piping, and several conduit systems similar to the Wiremold system but less well known. Wiremold products were somewhat higher in price than these competing products, but the company was convinced that they also were clearly superior for the uses to which they were suited. Wiremold conduit was sold to users for from about $4 to $6 a hundred feet. Standard packages of fittings were sold for a few dollars a hundred. Wiremold systems, outside of the field of wiring extension work, also competed with nonsurface wiring. Moreover, although in most places electric wires were required by the national electrical code to be covered, not all such wires were covered, and this provided the company with an opportunity to increase sales through educational work.

In the nine years since 1919 the company had built up a substantial volume of sales for its product. In 1928, however, its factory and organization set-up would permit sales three times as large as actual sales. Nevertheless, any less extensive set-up

would not permit the company to handle satisfactorily its existing sales volume. It was important, therefore, that sales should be increased. The company was of the opinion that the largest field for expansion was among industrial plants. Wiremold sales in that field were relatively less than in such markets as were represented by office and school buildings. In view of this situation, the company proposed to add to its line a larger size of Wiremold, which would enable it to meet fully the surface wiring needs of industrial plants as well as of other users. As it was, pipe had to be used for part of the surface wiring in industrial plants, where the present sizes of Wiremold were insufficient to accommodate the number of wires used, and there was a tendency for contractors to feel that if they must use some pipe they might as well use all pipe.

In connection with the problem of marketing its products so as to secure maximum sales, it also was necessary for the company to decide upon the number of distributors to use; it might grant exclusive agencies; it might sell to as many distributors as possible; or it might sell to selected distributors without exclusive territories.

The company's conduits and fittings were purchased and installed by electrical contractors for building owners or building contractors. The large number of electrical contractors and contractor-dealers in the country, therefore, constituted the company's market. These contractors, the sales manager of the Wiremold Company stated, usually required quick delivery. Their unit purchases varied from a few dollars to several hundred or even a thousand dollars.

In 1928 the company's plan of distribution was as follows. The United States was divided into nine territories, in each of which the company was represented by one agent, who handled several allied but noncompeting lines and who received a commission on all sales in his territory. These agents were expected to visit all the company's wholesale distributors once each month. On these visits they examined the distributors' stocks of Wiremold and advised the distributors as to what items to order. The company sought by this means to keep its distributors' stocks moving and to prevent them from overstocking with slow moving merchandise. The company also put up its goods in standard packages with this purpose in view. A standard package of a

type of fittings used infrequently, for example, contained fewer items than did a standard package of a type that was used with every few feet of conduit. Prices for broken packages were proportionally higher than prices for standard packages.

The company's distributors were wholesalers of electrical supplies. It was the company's policy to sell to as many of those wholesalers as possible. The company regarded as its distributors, however, only those wholesale firms which carried specified quantities of stocks. And only to those wholesalers did the company give its lowest prices. The company had two sets of prices: one for the wholesalers who carried specified stocks and one for wholesalers who did not carry the required stocks, retailers, and contractors. To be classed as a distributor it was necessary, in general, for a wholesaler to place an initial stock order of from $500 to $1,000, the exact amount depending upon the territory in which the wholesaler was located. The distributors were expected to maintain their stocks at approximately this level. The sales manager of the company in January, 1928, stated that there were in the United States 650 electrical supply firms that he deemed suitable distributors for the company's products; there were about half that many more electrical supply firms that because of their credit ratings or their small size were not regarded as suitable distributors. Of the 650 firms, 480 were distributors for the Wiremold line and carried the required stocks. Practically all the company's sales were made through its distributors. The sales manager stated that the distributors' gross margin on the company's products was liberal. The distributors sometimes bid against each other on Wiremold products and cut prices; in so far as it could, the company discouraged this practice.

The Wiremold Company was employing no salesmen in 1928, but it had at various times employed missionary salesmen to do educational work in introducing Wiremold. It advertised in trade papers read by electrical and building contractors. It also circularized contractors regularly and provided distributors with catalogs, bearing their imprints, for distribution to their customers. It was the executives' opinion that the burden of demand creation must be borne by the company and its agents; distributors would be interested in the line only if the company was able to build up a demand for it among contractors.

Distributors frequently asked for exclusive sales territories

for the Wiremold line. The company always refused such requests. The company planned to secure as many as possible of the 650 eligible wholesalers as stock distributors for its line. In any particular territory, however, the company planned to see to it that there were not so many distributors as to result in price cutting or in loss of interest in the line.

COMMENTARY: The retail market for Wiremold conduits and wiring devices was composed of a large number of dealers and contractors, many of whom operated on a small scale.[1] These dealers and contractors often required prompt deliveries. To stimulate sales to dealers and contractors, the company could not rely on aggressive sales efforts by the wholesale supply firms even had exclusive agencies been granted; each supply firm handled too many items to warrant an expectation that its salesmen would devote a large amount of special attention to a single item such as Wiremold conduits. The burden of promoting the sales of the line therefore had to be carried by the company's advertising. Moreover, although the Wiremold conduit had special features and was patented, it was by no means free from competition. Hence, even if a dealer or contractor had been converted to the point of expressing a preference for Wiremold products, he was likely to accept a substitute when the supply firm from which he usually bought such goods did not carry Wiremold conduits in stock and recommended a competing make instead. Under these circumstances the Wiremold Company could expect to secure a maximum volume of sales by intensive distribution among the wholesale supply firms. The 650 electrical supply firms which the company had secured, or was seeking to secure, as distributors should have been able to provide intensive wholesale distribution for Wiremold products.

It also is to be noted that the company was following a progressive merchandising policy in adding a larger size of conduit to its line, so as to be in a position to supply more nearly all a user's requirements of its type of products.

March, 1928 M. T. C.

[1] See Mersey Appliance Company, 3 H.B.R. 50.

Van Dort Grinding Wheel Company[1]

MANUFACTURER—GRINDING WHEELS

Distribution Channels—*Direct Selling Combined with Use of Exclusive Distributors.* The company, a manufacturer of grinding wheels, sold its products by means of five distributors with exclusive territories and seven salesmen, who secured orders for distributors' accounts as well as orders outside the exclusive territories. Although the company had granted the exclusive territories in order to have stocks of its wheels in various industrial centers, at least 75% of its products were made to order. Moreover, its own salesmen secured 75% of the orders in the territories of exclusive distributors. Consequently, when the company planned to begin selling in industrial centers not covered by its salesmen or distributors, it debated whether to grant exclusive territories in the new areas and whether to terminate its existing exclusive arrangements.

(1927)

For selling the grinding wheels which it manufactured, the Van Dort Grinding Wheel Company, located in Pennsylvania, had seven salesmen and five exclusive distributors. The salesmen had their headquarters at the offices of the exclusive distributors and, in the exclusive territories, took orders for distributors' accounts. The company figured, in fact, that 75% of the sales of its exclusive distributors were upon orders taken by its own salesmen. The company had granted the exclusive territories as a means of having stocks of its wheels in various industrial centers. At least three-fourths of the wheels which the company sold, however, were made to order and, in 1927, it seemed that the services of the exclusive distributors might be unnecessary. As soon as it could secure and train additional salesmen, furthermore, the company planned to begin selling in other industrial centers not covered by its present salesmen and distributors. It would be necessary for the company to decide whether to grant exclusive territories to supply firms in the new areas.

The company made grinding wheels of various types and in several thousand sizes. Prices ranged from a few dollars per wheel to $30 or $40. Some of the wheels in the smaller sizes were standard and were widely used. Most users, however, especially the larger ones, required wheels of special sizes and types

[1] Fictitious name.

to meet their particular needs. In view of this fact, the company did not undertake to maintain stocks of every size and type of wheel which it was called on to manufacture. If a customer gave reasonable assurance that he would require additional wheels of a type for which he had placed an order, the company carried stocks of the item. The company also undertook to carry stocks of wheels for which there was a more or less constant demand. Average stocks at the company's plant amounted to approximately $75,000. From this stock the company was not able to fill more than 25% of its orders.

The company's exclusive distributors were mill and factory supply firms selling such items as hacksaws, belting, and drills. One was located in Detroit, one in Chicago, one in Cleveland, one in Indianapolis, and one in Philadelphia. These firms bought outright from the company at prices which allowed them an average gross margin of approximately 30% of sales. According to the terms of the company's agreement with its distributors, each distributor was to carry stocks of Van Dort grinding wheels sufficient to meet the reasonable needs of his territory. Average stocks of each distributor amounted to about $5,000. Van Dort salesmen supervised the distributors' grinding wheel stocks and advised as to purchases. The distributors had as their exclusive territories the areas in which their salesmen traveled regularly—areas ranging in diameter from 50 miles to 100 miles. Any sales which the company's salesmen made in these territories, whether billed through the distributors or directly, were credited to the distributors.

In the opinion of the general sales manager of the Van Dort Grinding Wheel Company, it was necessary for salesmen of grinding wheels to be trained in the technical characteristics of the products, so as to be able to advise users as to special applications and, when difficulties arose, to make suggestions for improvements. Prices of the various manufacturers of grinding wheels were very similar, he stated, so that it was necessary to sell the wheels on a basis of quality and service. Van Dort salesmen consequently were carefully trained. The distributors' salesmen, however, had many items to sell and were not trained to meet the special needs of users of grinding wheels. The company's salesmen made their headquarters at the distributors' offices. In the exclusive territories they sometimes traveled with distributors'

salesmen and sometimes alone. The salesmen's territory included not only the territories of the exclusive distributors but also as much of the surrounding areas as they could cover satisfactorily. Orders taken outside of the exclusive territories were billed directly. About 75% of the company's sales were made outside the territories of the distributors.

The company's salesmen for the most part called on large users. Large users preferred to deal directly with the company's salesmen rather than with the salesmen of distributors. Customers buying $50,000 or more of Van Dort grinding wheels annually were generally billed direct. The salesmen saw some customers every other day and others they saw at less frequent intervals. Each salesman made a daily report to the sales manager on visits for the day and the results of the visits. Two of the salesmen received a 10% commission on sales, from which they paid their traveling expenses, and the other five salesmen were paid salaries. The company was of the opinion that a salesman's compensation and traveling expenses should not exceed 10% of his sales.

It was the company's experience that large grinding wheel users located in cities which were centers of grinding wheel users were unwilling to buy from a company which did not have stocks of wheels in their localities. Competing manufacturers of grinding wheels maintained either wholesale sales branches or exclusive distributors with stocks in the grinding wheel centers. Yet most large users and many smaller ones, the sales manager stated, customarily placed orders sufficiently in advance of their needs to permit the wheels to be made to order. This required five or six weeks. Even when users required immediate delivery it frequently happened, under the existing arrangements, that neither the distributors nor the company had the particular wheels required in stock. Not more than 25% of the requirements of the company's large customers were filled from the distributors' stocks. The sales manager was of the opinion that approximately this same situation was true of other manufacturers of grinding wheels. Outside of grinding wheel centers, grinding wheel users, the sales manager stated, did not attach so much importance to having stocks in their territories. Large users customarily bought from two sources.

The Van Dort Grinding Wheel Company ordinarily advertised in one or two trade papers. It also circularized selected lists

of potential customers from time to time. When a special wheel made for some firm proved especially satisfactory, the company sometimes announced this by means of circulars to similar firms which also could make use of that type of wheel. Many small users ordered directly from the company by mail.

If the company terminated its exclusive territorial arrangements it would not carry stocks at branch points, since that would be more costly than sale through distributors. The sales manager was of the opinion that not many sales to the smaller users would be lost if the exclusive arrangements were discontinued. He believed, however, that there was a serious possibility that such action would interfere with sales to large users.

COMMENTARY: The evidence in this case seems to indicate that the company was clinging to a traditional practice which, although it may have had some practical justification in the attitude of the company's customers, apparently had little rational justification. The exclusive distributors' average gross margin was 30%. The company's sales in the territories of the exclusive distributors constituted approximately 25% of its total sales. For 75% of the sales in distributors' territories the orders were taken by the company's salesmen but credited to the distributors. Thus, if these figures for estimated ratios be accepted as approximately correct, the Van Dort Grinding Wheel Company was paying a heavy bonus to the distributors for securing orders for 6¼% of its sales, for permitting its salesmen to maintain headquarters at their stores, for carrying stocks from which comparatively few orders were filled, and for making collections on less than 25% of the company's sales.

It is stated that the large users preferred to deal with the company's salesmen rather than with the distributors' salesmen and elsewhere that the large users were unwilling to buy from a company which did not have stocks carried in the users' respective localities. These statements are not necessarily inconsistent but they suggest an effort to rationalize the traditional practice of providing for stocks in certain territories. The insistence on local stocks loses some of its force, moreover, when it is noted that three-fourths of the purchases by the users were of wheels made to order.

It is quite possible that the services of distributors were needed by this company but the reasons therefor remain obscure.

December, 1927 M. T. C.

Cathron Company[1]

MANUFACTURER—ELECTRICAL APPARATUS

Sales Organization—*Manufacturers' Agents Utilized in Preference to Direct Selling.* When it had first started production, the company, which manufactured a limited line of electrical apparatus, had chosen sale by manufacturers' agents, to whom it granted exclusive territories and paid a commission on sales, as the most economical and effective method of distribution. After several years, the company's sales in some territories had reached a point which the executives believed justified direct sales branches. Although direct selling probably would reduce sales costs and make possible more aggressive sales efforts, the company decided to continue the use of manufacturers' agents, because it believed it had a moral obligation toward the agents who had sold its products for several years, because much of the goodwill established by agents attached to the agents themselves rather than to the products, and because establishment of sales branches in some territories might weaken the morale of agents in the other territories.

(1926)

The Cathron Company for over 20 years had manufactured a limited line of electrical apparatus, such as transformers and switchboards, which from the start it had sold by means of manufacturers' agents working on a commission basis. Several times during the five years prior to 1926 officials of the company had considered discontinuing the use of manufacturers' agents in the larger cities and establishing sales branches there for direct selling.

The company sold its products almost entirely to electrical central power and lighting stations and electric railway companies. The principal use of the transformers was on high tension power lines. Although the company had standardized its types of transformers, each type was subject to a number of variations to meet the different voltage requirements and other special conditions. The unit selling price of the equipment ranged from $25 to $15,000.

When the company first had been organized with small capital and a small producing capacity, it had not been in a position to support its own organization for direct selling, and consequently had made use of manufacturers' agents. By 1926 the company

[1] Fictitious name.

had secured national distribution by 30 manufacturers' agents, each of whom had an exclusive territory. Contracts between the company and its agents were renewed annually.

The company's agents were men of engineering training who were able to talk in technical terms about the products. They had sold the products of the Cathron Company long enough to become thoroughly familiar with their special features. Most of the agents represented also one or more allied noncompeting lines, such as circuit breakers, although in four instances the agents had given up their other lines and represented only the Cathron Company's devices. An agent ordinarily maintained a sales office with two or three salesmen; a few of the agents had field engineers to render service in case of trouble with the devices. Such purchasers of the equipment as central stations and hydroelectric plants usually did not require special installation service other than printed instructions and some technical advice by the agent relating to special features of the devices. When an agent was attempting to obtain a special order or an unusually large order, or when some technical problem arose which the agent could not solve, the company sent an engineer to assist the agent. The rate of commission allowed the agents was 10% of sales. The agents paid all office, sales, and service expenses from their commissions. By 1925, 10 of the 30 agents had represented the company for at least 10 years. These 10 agents were located in the principal cities of the United States. In the smaller cities where the company had representatives, it sometimes had shifted from one representative to another in an attempt to find a capable man.

The Cathron Company advertised continually in trade papers which reached electrical engineers in central stations and other electrical fields. It also had compiled a mailing list of engineers and assistant engineers in central stations, hydroelectric plants, electrified railways, and electric traction companies throughout the United States. It circularized this mailing list frequently with broadsides of reprints of the trade paper advertisements and announcements of new products or of improvements in existing products. It also had developed, for distribution to interested persons, a handbook of technical electrical information especially useful to engineers. Although the company had built up a high reputation for its products and had many special features as selling arguments, the sales manager estimated that the factor of

comparative prices could be assigned a weight of about 75% in influencing sales.

For several years prior to 1926, the company had been somewhat dissatisfied with the use of manufacturers' agents. The company did not have close control over these representatives and, because of their divided interests, the agents did not sell the company's products so aggressively as would salesmen in the direct employ of the company. The agents usually sold most aggressively the products which encountered the least sales resistance or on which the highest commission was paid. A few of the agents, after building up a substantial volume of sales which insured them an adequate income, seemed content to let matters rest and were not eager to secure the additional volume which the company believed the territories warranted. Although the company could exert some control over its representatives by holding before them the possibility of losing the territories, it rarely had changed representatives in the large cities, since capable representatives were scarce.

Of the Cathron Company's competitors, two large companies which manufactured complete lines of electrical supplies and apparatus, including transformers, had direct sales offices in practically all the large cities of the United States. Small manufacturers of electrical apparatus ordinarily sold their products by manufacturers' agents.

A few officials of the Cathron Company believed that the actual or potential volume of sales in each territory should determine whether to establish a direct sales branch there. In territories of scattered sales prospects and relatively small potential volume of sales, a single line such as the Cathron Company made could not support a separate sales office. In those territories, agents who represented several lines should be used. In eight of the territories, however, the sales of the Cathron Company had reached a point which the officials of the company believed would justify direct sales branches. In two territories, for example, in 1925, the commissions which the company paid its representatives for the year totaled over $40,000 each. The officials estimated that the company could establish a branch in each of the eight territories and maintain a sales organization similar to that of the representative at an annual cost of $20,000 for each territory.

Although the company officials had discussed the probable

savings in sales cost to be secured through the establishment of branches and the probable greater effectiveness of direct salesmanship, the president of the company always had opposed the discontinuance of agents. In his opinion, the company had a moral obligation to the agents who had represented it for years. These representatives had been loyal to the company; during the early years of the company's existence they often had incurred losses on sales of transformers and they had been able to continue selling the line only because of profits on the other lines represented. He believed the company would display ingratitude if it were to establish a branch sales office in a territory as soon as the sales in that territory reached a volume profitable to the representative.

It was the opinion of the president, moreover, that the establishment of a few branch offices and the dropping of the representatives in those territories might weaken the morale of the remaining representatives. The company was not in a position to attempt direct sales in all territories. The president questioned, also, the assumption that a direct sales organization would be more effective than manufacturers' representatives in selling the company's products. The representatives of the company in most instances had lived in their respective territories all their lives. They had established friendly relations with many of the electrical engineers in their territories and frequently could secure a personal interview with a central station executive whom the company salesmen would have difficulty in reaching. Much of the goodwill established by the manufacturers' representatives was attached to the representatives themselves rather than to the products represented. The use of representatives, furthermore, made the budgeting of sales expenses less difficult, since the commissions remained a definite percentage of sales regardless of fluctuations in sales volume. In periods of depression the representatives and not the company bore the expenses and possible losses of maintaining an office and a sales organization.

In view of all these factors the Cathron Company decided to continue distributiong its products by manufacturers' agents with exclusive territories.

COMMENTARY: This case illustrates one of the weaknesses that may accompany a plan of sale by manufacturers' agents; namely, that these

agents may tend to attract patronage to themselves rather than to the products and the companies which they represent, thus making a change to direct selling by the represented companies difficult or even hazardous.

It should be recognized that the scheme of sale by manufacturers' agents stands as an expedient form of distributing machinery for the small manufacturer of industrial products who lacks financial resources to build his own sales organization and for the manufacturer whose products are so few in number or whose market is so thin or sporadic or whose unit sales are so small that he cannot bear the expense of a direct selling organization. The manufacturers' agent has an established patronage which the small, beginning manufacturer has not; the manufacturers' agent can distribute his expenses over a number of lines of goods, whereas the manufacturer of a single product or a few products must place the whole burden on his narrow line of goods.

In the beginning the Cathron Company probably gained a wider and quicker distribution and gained it with less expense by turning to established manufacturers' agents than it could have by establishing its own sales force. The company had reached a stage, however, where it could support a direct selling organization in numerous territories, and several factors were strongly in favor of such a form of distribution.

The advantages and disadvantages of a change to direct selling by the Cathron Company as rapidly as territories became well enough developed to support direct selling were fairly clear. In favor of retaining the manufacturers' agents were the following considerations: the company still needed such representatives in several of its territories, inasmuch as the volume of business there was not large enough to support direct selling. To have made a change in policy by setting up direct selling branches in the territories with larger sales volume might well have had a bad effect upon the morale of the remaining agents. Moreover, if the territories were put on a direct selling basis there was danger of temporary loss of patronage. The sales representatives had built up, to a large extent, a personal following in their territories rather than a patronage for the products which they represented.

The president of the company was moved largely by a feeling of obligation to the manufacturers' agents who had stood by the company in its developmental period, but it is doubtful whether the company could continue indefinitely to be moved by this consideration. As in most similar situations, there were conflicting obligations. The executives of the company were responsible to the stockholders to secure the best results possible. Moreover, it was understood that the contracts with sales agents might be terminated in accordance with the terms of the contracts. Some of the agents might have been willing to discontinue the sale of competing products and to enter the employ of the Cathron

Company as sales branch managers. It is true that the agents and the company had become mutually dependent to a large degree and that it was desirable to care for the interests of both parties.

Although the company's products were technical and required technical sales ability, they apparently were not so highly technical but that they could be sold satisfactorily and given satisfactory service through a scheme of manufacturers' agents. At the same time, a direct selling organization gave promise of more efficient installation advice and subsequent service. Moreover, direct selling would have enabled the company to develop the territories more aggressively and to control the sale of the various products so as to give the best operating results for the company as a whole. The direct selling by competitors should have led this company to turn to the most aggressive of sales methods. In its industrial advertising program the company had laid a background for undertaking its own distribution. Finally, the indications were that not only would direct selling be more aggressive, but it would be more economical in some territories. Accordingly, it is concluded that in spite of the danger of temporary loss of patronage through the change of policy, the company should have planned to undertake direct selling in those territories where the sales possibilities were sufficient to justify that type of selling.

July, 1926 N. H. B.

Prior Automatic Machinery Company[1] (A)

MANUFACTURER—COIN COUNTING MACHINES

Sales Organization—*Direct Personal Selling Utilized in Preference to Mail Solicitation or Manufacturers' Agents.* The company, a manufacturer of packaging machinery, decided to manufacture and market coin counting machines also. The company considered the possibility of marketing the counting machines directly by mail or through sale by manufacturers' agents, but decided to develop its own sales organization for the line and to sell directly to users.

Sales Organization—*Segregation by Lines of Products.* The company, a manufacturer of packaging machinery, decided to manufacture and market coin counting machines also. Since the market for the coin counting machines was entirely distinct from that for packaging machines, and since the sales and service problems for the two lines were different, the company decided to develop a separate sales organization for the new line.

(1925)

The Prior Automatic Machinery Company had manufactured automatic packaging machinery for over 35 years. In 1925 the company proposed to market coin assorting and counting machines. The prospective markets for these machines were so different from the markets for packaging machinery that officials of the company were of the opinion that the new product required a separate sales organization and different channels of distribution. Three plans were considered: that of developing a separate direct selling organization for the product; that of granting exclusive agencies to manufacturers' agents in various sections of the United States; and that of attempting to market the machine by mail.

The products of the Prior Automatic Machinery Company had consisted of automatic machines for weighing, packaging, and labeling products which manufacturers sold to the retail trade in cartons or packages. One series of five machines, for example, would take a flat folded cardboard carton which was cut in the proper shape, open the carton and seal the bottom to form a box, line the box air-tight inside with paraffin paper, weigh out and pour into the box the desired amount of the manufactured prod-

[1] Fictitious name. See also Prior Automatic Machinery Company (B), page 368.

uct, such as sugar or cereal, fold and seal the top of the box, and deliver the filled box on a conveyor belt ready for storing or shipping. Such a set of machines had a capacity of 30 to 35 packages a minute or 15,000 to 18,000 packages a day, which equaled the output of from 25 to 40 hand operators, depending upon the nature of the material and type of package. The unit price of the company's machines ranged from $3,000 for a single unit which would perform one operation in a series of packaging operations, to about $18,000 for a set of machines which would take a package through all the operations of packaging. While the actual life of the machines averaged from 15 to 25 years, improvements in design might make a machine partially obsolete in from 5 to 10 years after installation.

The market for the company's packaging machinery was limited by the large capacity of the machines to large manufacturers and for the most part to manufacturers of nationally advertised products. The companies which could use packaging machinery to advantage for the most part were large manufacturers of dry, free-flowing materials such as sugar, flour, cereals, coffee, cocoa, salt, and poultry food, and various powders such as soap powder, baking powder, and tooth powder.

The Prior Automatic Machinery Company sold its packaging machinery directly to users. The company employed six salesmen, who were thoroughly familiar with packaging machinery and who were able to visit a factory and demonstrate to the factory superintendent or production manager the savings that would result from the installation of automatic packaging machinery. These salesmen all had been with the company for 10 years or longer, were well versed in the technicalities of the product, and could render pre-installation advice. Two of the salesmen were located in a branch office in New York City and, with the exception of New England, these salesmen traveled practically all the territory east of a line drawn along the Mississippi River to St. Louis, thence to Toledo. One salesman was located in a branch in Boston to cover the New England territory; one salesman was located in a branch in San Francisco to cover the Pacific Coast; and two salesmen were located at the home office in Chicago to cover all the central United States as far west as the Rocky Mountains. Branches did not carry a stock of machines or repair parts. The salesmen were paid a commission of 5% on sales. The company

expected a salesman to sell about $250,000 of machinery annually. It paid the branch office expenses and the actual transportation expenses of the salesmen. It did not pay hotel bills or living expenses. Salesmen were allowed to exercise wide discretion in determining their itinerary and the frequency of visits to prospects. Service on the machines after the completion of the sale was rendered by technical field men.

Since the market for packaging machinery was limited to large manufacturers, the company definitely knew practically all its prospects. The salesmen had developed cordial relationships with the active customers of the company, who numbered under 500. Most of these customers were located in the north Atlantic, north central, and central northwestern states, although there were a few customers such as coffee, flour, and cereal companies located in the southern and western states. The salesmen, therefore, traveled extensively but visited only a few cities. A technical field man was located at each branch office. These men gave technical service during the installation of machines and were available whenever trouble was reported. The company at its home office carried about a $750,000 inventory of finished machines and repair parts which were available for immediate shipment to any part of the country.

Early in 1925 the Prior Automatic Machinery Company became interested in a small company which was making a few automatic coin counting machines. The inventor of the coin counting machine had only a limited capital and with the assistance of one salesman had made a few local sales of the machine. It usually had been necessary for the inventor to sell one machine in order to secure enough working capital to make another. Officials of the Prior Automatic Machinery Company believed that a large potential market existed for the coin counting machines among banks and various types of retail establishments. The company had made no market survey, but the officials estimated roughly that over 500 coin counting machines could be sold annually. The factory of the Prior Automatic Machinery Company was well equipped to manufacture the coin counting machines. The company, therefore, early in 1925 purchased the patents relating to the coin counting machines and employed the salesman who formerly had worked for the inventor to assist in the development of the market for the machines.

The coin counting machines were motor operated and were small enough to be placed on top of an ordinary desk; each machine weighed about 85 pounds. An assortment of all United States coins could be placed in the hopper of the machine and the machine, at the rate of 225 coins a minute, would sort, count, and pack the coins in paper wrappers. There were numerous coin counting devices or machines on the market. Most of these, however, either were for use only for one size of coin or had such a large capacity that only large companies could use them. One machine on the market, for example, would sort coins three times as fast as the new machine. It was large and cumbersome and was available to users at a rental of $1,000 a year. Other competing machines sold at prices ranging from $100 for small machines which would count only one size of coin, to over $1,000. The Prior Automatic Machinery Company estimated that it could sell its machines for $650 each and believed that it would have a great competitive advantage in seeking to sell to companies which took in from $250 to $500 in assorted coins during a day. The company expected that the machines might become obsolescent in about five years, although the actual operating life of the machines would be much longer.

The company decided at once that it could not use its existing sales organization to market the new product. The market for the coin counting machines was entirely different from that for packaging machinery. The unit price was small compared with the unit price for packaging machinery and the total probable sales to any one company, with the exception of large chain store companies, would be small compared to the total sales of packaging machinery to a single manufacturing company. A few food products companies, for example, each had over $500,000 worth of the Prior Automatic Machinery Company's machinery. A relatively small number of companies were prospects for packaging machinery. On the other hand, a large number of business establishments scattered throughout the whole United States were prospects for the coin counting machines. The packaging machinery salesmen were trained technically to sell packaging machinery and were devoting their entire time to that task. These salesmen were not willing to spend additional time on a product of such small unit value

As far as the sales manager was able to ascertain, there were

no supply houses or wholesale distributors available as outlets for such a coin counting machine. The company considered, therefore, three methods of marketing the coin counting machines: by personal selling, by selling through agents, and by direct-mail selling. The company had had no experience with manufacturers' agents in the United States. Most of its experience had been in direct selling by its own salesmen, although it had had some favorable experience in the sale of a small bottling machine by mail order.

The sales manager of the company believed that the principal market for the coin counting machines was among banks. In order to test out who the users of the machines might be, the company, in 1925, ran four half-page advertisements in a general business magazine. These advertisements described the product and urged those interested to write for a circular, which would give a more detailed description. The company received 200 returns from these advertisements. Fifty per cent of the inquiries were from banks, and approximately 45% were from commercial companies, such as ice companies, chain stores, and unit retail stores.

In answering the inquiries which resulted from the advertisements, the company sent a circular describing the product but did not urge the prospects to purchase, since the company had not as yet developed a sales organization. One result of the advertisements was to bring to the company a number of requests from individuals in various parts of the United States for appointment as exclusive agents for the machines. Some of these inquiries were from men who wished to represent only the Prior Automatic Machinery Company and who wished one of the machines as a sample in order that they might go from bank to bank and demonstrate it. Other requests were from companies or partnerships which had been established for several years as agents selling different lines of machinery or office appliances.

There was a difference of opinion among company officials as to the desirability of distribution by manufacturers' agents. The general manager believed that an agent, especially one who represented other lines, would not push the sale of the coin counting machines as vigorously as the company's own salesmen would. Although the machines did not require any technical installation service, successful use did require a certain amount of mechanical

ingenuity on the part of the operator, and the salesman had to give adequate instruction in the use of the machines. Coins sometimes were defective or bent and became jammed in the machines. Fairly elaborate directions for the correction of this and for the operation of the machines could be printed, but the limited experience of the company indicated that the user of coin counting machines ordinarily was not one with a natural mechanical ingenuity or the patience to follow long directions. In this respect, the product differed from lines of machine tools which frequently were sold by manufacturers' agents; the users of machine tools were technical men who could overcome minor technical difficulties without the assistance of the manufacturer. The general manager believed also that in order to have effective distribution by manufacturers' agents it was necessary that the manufacturer of the product have an established reputation in the field, since the manufacturers' agents themselves rarely did much local advertising and rarely were well known among the prospective purchasers. Although the Prior Automatic Machinery Company had a long-established reputation in the packaging machinery field, it was entirely unknown to small banks, ice companies, and other mercantile companies.

In its foreign trade the company had had unfavorable experiences with agents for packaging machinery. Foreign agents had failed to push the product and were incapable of giving the necessary technical service. The company, therefore, had established several branches in the principal foreign markets.

As a trial the company granted, early in 1925, one exclusive agency for the coin machines in Atlanta, Georgia, to a partnership of three men who represented also certain office supply manufacturers. According to the agreement made by correspondence, the Atlanta agency was to receive approximately a 30% commission on sales of the coin counting machines. After six months, this agency had not made a single sale, although it did have a few machines out on demonstration to banks.

The advertising manager of the Prior Automatic Machinery Company maintained that the agency method of distribution had advantages, particularly in the distant territories where the total sales probably would not warrant a branch office or traveling salesmen. He believed that after the company became better known through advertising and after it had made a few improve-

ments in the machines, the need of which had been demonstrated by actual use, the use of agents in the distant territories would be a feasible channel of distribution.

The problems of distributing the coin counting machines were believed to be similar to the problems of a manufacturer of calculating and adding machines. One company, for example, which manufactured electrically operated calculating machines to retail at from $450 to $500 distributed these machines through its own sales offices in 11 large cities. Each of these cities with the surrounding cities and towns composed a district which was in the charge of a district manager who was responsible to the general sales manager at the home office. The district manager hired his own salesmen, arranged terms with them independently of the home office, and paid them from his share of the profits. Ordinarily, salesmen received approximately 20% on sales and were guaranteed a minimum drawing account of from $20 to $30 a week. The average number of salesmen employed by a district manager was three. The district manager received a straight commission of 30% on all sales. Out of this he had to pay all expenses. He usually carried in stock about 25 machines which the company consigned to him.

A company which manufactured addressing and mailing machines, on the other hand, distributed its products by 100 branch agents located throughout the United States. The average selling price of the machines was from $50 to $75, although the highest-priced machine sold for $1,000. The company supplied 35 of the 100 agencies with stocks of machines and paid the agents from 25% to 33 1/3% on sales, varying with the different products and territories. Of the 35 agents who carried stocks, 15 sold other noncompeting lines of office equipment. The agents operated independently of the company and paid salesmen's salaries and office expenses from their commissions. Each agent had an exclusive territory for the mailing machines.

The advertising manager of the Prior Automatic Machinery Company also favored a trial of selling coin counting machines by mail. The company for several years had manufactured small bottling machines which it sold for $250 each. Because of the small unit sale value and the fact that the market for bottling machinery was among prospects other than those for packaging machinery, the company had marketed these small machines by

mail to users such as pharmaceutical manufacturers. The company had been able to buy lists of prospective users from mailing list houses and had sent out circular letters to these prospects in groups of 10,000 letters at a time. Out of a group of 10,000 letters it had been the experience of the company to receive 200 favorable replies as a result of which it eventually would sell 75 machines. For each favorable reply the company would send an average of seven follow-up letters. The total cost per letter of circularizing and follow-up letters amounted to approximately 10 cents. This included all overhead charges. The cost, therefore, of selling these machines by mail averaged under $16 per machine. The company sent to each purchaser of a bottling machine complete written instructions for installation and operation and detailed diagrams showing the construction of the machine. Ordinarily there were persons employed in a factory which used bottling machinery who possessed the mechanical skill necessary in making adjustments and minor repairs. The Prior Automatic Machinery Company would give advice concerning repairs or adjustments by mail if requested to do so. Officials of the company believed that adequate service was given in this way.

In the fall of 1925 the company sent out a group of letters to possible users of the coin counting machines in the territory around Chicago. From this group of letters the company received favorable replies at the rate of 25 per 1,000 letters. In these instances the company sent out salesmen from its home office to follow up the inquiries, and as a result the company had placed about 50 machines for demonstration. The advertising manager concluded that the number of replies received from the initial magazine advertisements and from the first group of circular letters indicated considerable interest in the product. He thought it indicated also that the product might be marketed successfully by mail.

The coin counting machines differed, however, from the bottling machines in the amount of service and technical advice required, and the general manager believed that if the prospects were circularized, the inquiries should be followed up by a salesman of the company. The relatively high unit price of the coin counting machines also was a deterrent to selling by mail. The general manager was of the opinion that if the unit price of a machine exceeded $500, personal salesmanship was necessary. He

believed that the marketing of the coin counting machinery would require a direct sales organization similar to the branch organization of some manufacturers of calculating machines but on a smaller scale, since the market was somewhat more limited. He decided to develop such an organization gradually by spreading out from the more densely populated sections of the country.

By the spring of 1926 the company had six salesmen for coin counting machines. Three traveled from the home office in Chicago, one from the New York office for New York City only, another from the New York office for the state of New York outside of New York City, and one from the Boston office for all New England. These salesmen were paid a commission of $150 for each machine they sold. This amounted approximately to 23%. The company decided upon this rate of commission after considering the amount of potential income necessary to induce good salesmen to sell the machines. The company estimated that an average salesman should sell one machine a week. Salesmen of office appliances such as calculating machines who were paid on a straight commission basis usually received from 20% to 30% commission on sales. The company paid all transportation and incidental traveling expenses of the coin counting machine salesmen. These salesmen were under control of the home office, which specified their itinerary and furnished lists of prospects. The company planned to sell the machines with the privilege of 30-day trial demonstration.

The company had not advertised the coin counting machines in any publication, with the exception of the initial four advertisements in the general business magazine. The advertising manager did not plan to advertise the product nationally until the sales of the machine had reached a total large enough to justify the expansion of the sales organization to cover all the principal cities of the United States. He was of the opinion that the sales organization should be developed before any advertising was undertaken. One member of the sales organization had urged that the company should advertise extensively in bankers' magazines and business publications before a national sales organization was developed, since this would reduce the sales resistance and expedite the expansion of the organization.

By the spring of 1926, the company had manufactured 100 coin counting machines and had started a factory order for 150

more machines. It actually had sold 25 machines and had 50 machines out on demonstration.

COMMENTARY: Among the issues which are presented in this case, comment will be made upon three: namely, (1) the question of segregating the sales force; (2) the applicability of mail distribution for the coin counting machines; (3) the use of manufacturers' agents as a channel of distribution for such a device.

Segregation of sales force. This case affords a clear-cut example of the desirability of segregation of a sales force when the products have markets among entirely different prospects and require different technical equipment and training of the salesmen and different methods of sales promotion. The reasons for not using the packaging machinery sales force for the coin counting machine are outlined in the case; the markets for the two products were entirely different and the type of salesmen called for were different. The most efficient results undoubtedly would be attained by having different salesmen for the different products.

Selling direct by mail. Although the sale of these machines by direct mail methods was not impossible, the company could not have expected aggressive merchandising from such a method. As pointed out, several factors operated against selling direct by mail. In the first place, the price was high. Although numerous instances of sale of products of high price by mail have been recorded, high price of a product usually is a deterrent to marketing by mail. Moreover, this company was practically unknown among the people to whom it would attempt to sell by mail; patronage motives had not been developed. Other factors operating against the sale by mail were the need of instruction in the use of the machine and the desirability of offering repair service, when needed.

A point of some significance concerning the furnishing of service for machines of this character is brought out in this case. The company had been successful in selling its small bottling machines by mail. That product was subject to mechanical maladjustments which might need correction. It is to be noted, however, that the bottling machines went into plants which usually had mechanics who could take care of the ordinary adjustments and repairs that were required. The coin counting machines, however, went into banks and stores where a personnel equipped to repair the machines ordinarily was not present. In other words, the type of service that must be furnished for a mechanical product may depend not so much upon the character of the product itself as upon the type of purchaser.

We may conclude that the decision not to attempt marketing this machine by mail was evidently well founded, because of the high price

of the machine, the technical character of the product, and the service which it required.

Sales through agents vs. sales by own sales force. There is nothing unusual or especially significant in regard to the sale of this product by manufacturers' agents. The product was not so technical nor did it require such extensive installation advice that it was rendered unsuited to sale by agents. Moreover, agents probably could have been relied upon to give the repair service that was required. It is probable, of course, that installation instruction and repair service from agents would not have been so satisfactory as that from a company controlled sales force.

The market for this product appeared to be large enough, the unit of sale was of sufficient size, and the need of aggressive selling was such that the company probably could expect the best results by building up its own selling force. During the period of the development of its own sales organization, however, the use of agents in the more distant territories was a possibility worth considering.

It is to be noted that the so-called agents who applied to the company for agencies for this product are not to be confused with the well-established manufacturers' agents handling numerous products in the industrial marketing field. Most of those persons who applied for agencies were men without established connections, who apparently were looking for a job. The company could not expect as aggressive nor as systematic selling from such representatives as from a sales force which it could control.

May, 1926 N. H. B.

Neyer Tool Company[1]

MANUFACTURER—GEAR AND WHEEL PULLERS

Sales Organization—*Use of Salesmen by Company Previously Selling by Mail.* Because of its declining sales volume, the company, which manufactured gear and wheel pullers and which sold directly by mail to distributors and users, considered employing salesmen to sell directly to users. The company decided to employ three salesmen, two of whom sold other lines as well. These men were able to secure few orders.

Product Adaptation—*Contacts with Users to Find Means of Improving Product.* Because of its declining sales volume, the company, which manufactured gear and wheel pullers, decided to employ a man to visit users in order to discover means for making the pullers more satisfactory to the users. The company sold directly by mail, and hence had few direct contacts with its market.

Distribution Channels—*Reference of Inquiries and Orders to Distributors.* The company sold the gear and wheel pullers that it manufactured directly by mail to distributors without exclusive sales territories and also to users. It had been the company's policy to refer all inquiries and orders from users to its distributors. In order to avoid unnecessary delays, and because large users preferred to deal with it directly, the company decided to fill directly all orders that it received and to refer inquiries to distributors only in territories where the distributors carried stocks of the pullers and were active in selling them.

(1927)

For 15 years prior to 1926, annual sales of the Neyer Tool Company had approximated $100,000 and net profits had in each year amounted to at least 20% of sales. In 1926, however, sales had decreased materially and net profits had been only 10% of sales. On the basis of sales during the first six months of 1927, sales for that year would not exceed $50,000. The Neyer Tool Company never had employed salesmen but in the spring of 1927 it considered the advisability of taking that step.

The Neyer Tool Company manufactured gear and wheel pullers in two styles. Each style of puller was made in four sizes. For one style prices ranged from $6 to $33, and for the other style from $9 to $50. The company also made special attachments for the pullers; list prices of these attachments ranged from $3 each to $20 each. Neyer pullers were universal tools, each one being

[1] Fictitious name.

suited to a variety of uses. Some of the common uses were the removal of engine flywheels, electric motor pulleys, line shaft couplings, automobile wheels, timing gears, cams, propellers, universal joints, and pinions. In many instances in which they were used, the pullers were not absolutely essential. They were convenient and served to save time and to prevent damage to machine parts. The special attachments which the company made had been developed in response to requests from customers. Among the attachments were extension jaws of various sizes, appliances for bending pipe, arbor press bases, and instruments for removing truck wheels. Sales of these attachments comprised only a small part of total sales. The company was convinced, however, that the potential market for the attachments was large. In the company's opinion, many users of Neyer pullers without attachments could make effective use of various of the attachments.

The pullers were simple in construction and most mechanics had no difficulty in using them properly without instructions. The special attachments required more ingenuity on the part of users. Several instances had come to the company's attention of customers who were dissatisfied with the special attachments because they were not using them rightly. This also happened occasionally in the case of the pullers. The life of the company's products was long.

The largest users of the company's pullers were garages and automobile repair shops. Ordinarily, about half the Neyer pullers that were sold were for use in this market. Other users of Neyer pullers were machine shops, mills, factories, and mines. In garages and automobile repair shops there were constant uses for gear and wheel pullers and many such firms needed several pullers. In factories, mills, and mines pullers were needed less frequently—in case of breakdowns, when new machinery was set up, and for various odd jobs. Ordinarily, each organization could make use of only one puller, with various attachments.

Seventy-five per cent of the company's sales were made to automobile accessory wholesalers, hardware wholesalers, and supply firms; the remaining sales were made directly to users. The company received few orders directly from garages and automobile repair shops. Most of its direct sales were made to factories, mills, and mines. In all there were approximately 500 distributors

who listed the company's products in their catalogs. The Neyer Tool Company supplied distributors with electrotypes of its products for their catalogs. It undertook to have its products described in the catalogs of as many distributors as possible. Listing the company's products in their catalogs was the chief service of a sales nature that most of the distributors gave the company. About half of the 500 distributors carried no stocks of Neyer pullers. Orders which they took for those tools they sent to the company, and, in most instances, the company shipped the tools directly to the distributors' customers. The other distributors ordinarily carried small stocks of Neyer pullers and attachments. The president of the Neyer Tool Company estimated that their average stocks of those tools amounted in value to about $200. The automobile accessory wholesalers usually carried no stocks of pullers in the larger sizes.

Quickness in delivery often was important in the sale of pullers. Factories, mills, and mines, for instance, often did not place orders for pullers until a breakdown had occurred. Then, if a puller could not be obtained at once, the necessary work was accomplished without the aid of that instrument.

The company allowed its distributors a discount of 40% from list prices with a further discount of 10% from the amount of the invoice for cash by the fifteenth of the month following date of invoice. The distributors in turn customarily allowed their customers a discount of 20% from list. To users, the company gave a discount of 10% from list prices and also the 10% discount for cash. The company's prices were adjusted to permit allowance of this large cash discount, and the president of the company stated that the discount had proved effective in securing prompt payments from customers. In 1927 the company was offering no quantity discounts. At one time it had offered quantity discounts but it had discontinued them because they failed to increase the proportion of large orders received. Most of the orders which the company received were small and the president of the company deemed it impossible to induce customers to increase the size of their orders.

Ordinarily, the Neyer Tool Company devoted 10% of annual gross sales to advertising. About half the advertising appropriation was spent for space in trade journals and about half for direct-mail advertising. In 1927 the company was advertising

regularly in the *American Machinist* and from time to time in other journals for the machine industries. Prior to 1925 the company had advertised regularly in several automotive trade papers. It had discontinued that advertising, the president stated, chiefly because he had concluded that there was no outstanding trade paper which reached the whole automotive industry and the company could not afford to advertise in a large number of journals. The number of inquiries received as a result of advertising in automotive trade papers had declined, moreover, as the number of those papers increased.

The company circularized its distributors at irregular intervals. It also provided them with circulars, bearing their names, for distribution to their customers. Beginning in 1925, the company also had circularized selected lists of potential users directly. It had, for instance, circularized 800 pulp mills throughout the United States. Outside of its immediate territory, the company did not circularize garages and repair shops directly but simply supplied its automotive accessory distributors with circulars for distribution to their customers. The company addressed its direct-mail circulars in some instances to the purchasing departments of the potential customers and in other instances to the mechanical departments. In the case of the special attachments it was particularly important that the advertisements should reach the master mechanics, since they, and not the purchasing agents, could appreciate the usefulness of the attachments.

At one time the company had followed a policy of referring all inquiries and orders to its distributors. This policy had been discontinued for two reasons: it was the company's experience that certain large firms preferred to deal directly with the manufacturer; and it frequently had happened that when the company referred an inquiry to a wholesaler the wholesaler had no stock of the item required and delayed the customer while ordering from the factory. The company had decided to fill directly all orders which it received from users but to refer inquiries to distributors when the inquiries were from territories in which there were distributors who carried stocks of Neyer tools and who were active in securing orders for those tools. In other instances the company answered the inquiries directly.

For about 15 years after it had begun to manufacture pullers, the Neyer Tool Company had had little competition. In 1927,

however, there were more than 60 firms in the United States manufacturing gear and wheel pullers. Several of those firms were much larger than the Neyer Tool Company. Some competing pullers were more expensive than Neyer pullers and some were less expensive. No competing pullers, the president of the Neyer Tool Company stated, were of higher quality than Neyer tools or more satisfactory in service. Many competing pullers were single purpose tools, whereas a Neyer puller was a universal instrument.

Several of the Neyer Tool Company's leading competitors employed salesmen to call on distributors and users and several sold by manufacturers' agents selling one or two other lines. The Neyer Tool Company had been founded by a man who was a master mechanic and whose chief interest was in producing a useful tool of high quality. No salesmen had been employed in the beginning, although the president occasionally had made sales trips. During the 25 years that it had been in operation, the company had experimented several times with the use of manufacturers' agents. These experiments never had been successful.

In the spring of 1927 the president of the Neyer Tool Company was of the opinion that sales might be increased by the employment of salesmen to call upon potential users. In the beginning the company would not expect to cover more than the seven or eight states in its immediate vicinity by means of salesmen.

The most serious decline in the company's sales had been in the garage and repair shop markets. The company ascribed the decrease in sales in part to increased competition but chiefly to general business conditions. Buyers, the president stated, were curtailing their purchases as much as possible.

In order for a salesman to sell directly to garages and repair shops it would be necessary, the president believed, for him to have stocks from which to make immediate delivery, since otherwise these potential users would tend to lose interest in the tool. Garages and repair shops, moreover, customarily purchased their equipment from automotive accessory wholesalers. It would be possible for the company to employ salesmen to solicit orders for wholesalers' accounts. The company, however, deemed that too expensive an undertaking.

While the company was deliberating as to the advisability of employing salesmen, a man who previously had been employed by the company and who was thoroughly familiar with the com-

pany's products asked to be allowed to sell Neyer pullers on a commission basis to firms other than garages and repair shops. That man at the time was selling gas storage tanks for use by persons in areas where electricity was not available for lighting and he expected to continue selling those tanks even if he sold Neyer pullers. The president of the Neyer Tool Company decided to let this man sell Neyer pullers, chiefly because he was familiar with them and was a competent salesman. On all sales which he made he was to receive a commission of 40% from list prices. The company would have no direct control over his activities.

The company decided that it did not wish to encourage garages and repair shops outside of its immediate territory to order directly from the factory. This was not so much because of the small orders which garages and repair shops would place as it was because of the difficulty of making collections from a large number of small firms.

For visiting garages and repair shops in its immediate territory, the company decided to employ one salesman on a salary basis and one on a commission basis. The man receiving commissions would be permitted to sell other lines as well. The other salesman was to solicit orders but his chief task was to ascertain uses which garages and repair shops had for pullers with a view to making recommendations for improvements in the company's products.

In the five months following their employment, both the man calling on users other than garages and repair shops and the man selling in those markets on a commission basis secured few orders. The salesman receiving a salary did not secure sufficient orders to pay his salary, but he obtained much valuable information as to the needs of the company's actual and potential customers.

COMMENTARY: The experience of the Neyer Tool Company indicates that during its pioneer period the company did not adopt adequate means for safeguarding its position under competitive conditions. The company was the first to manufacture pullers and for 15 years it had the entire market to itself. By 1927, however, it had 60 competitors, some of whom were strong and powerful companies. From 1910 to 1925, or thereabouts, the company had enjoyed a steady and satisfactory volume of sales. Then within 2 years its sales declined 50%.

These facts seem to indicate that the company had missed its opportunities to entrench itself marketwise while in a dominant position.

The case probably has greater significance from that standpoint than from the standpoint of determining how the company could extricate itself from its hazardous position.

The evidence in the case does not show conclusively what opportunities were missed. The fact that the salesman employed to visit garages and repair shops secured valuable information regarding the product suggests that the company may have neglected opportunities in earlier years to make its product as well suited as possible to the needs of users. If this was the case, it very likely was the result of lack of broad personal contact with the market prior to 1927.

The company's advertising also may have been deficient in content. In fact, the same lack of contact with the market, to which reference has just been made, must have rendered extremely difficult the preparation of effective advertising copy. Fifty per cent of the company's market, furthermore, was in the automotive trade. Yet, in 1925, the company discontinued advertising in automotive trade papers, and the results, as reflected in the decline in the volume of sales, did not imply that the direct-mail circulars had proved to be an effective substitute. If the circulars were deficient, however, that probably was because of defects in their contents or in the methods of distributing them rather than because of any inherent weakness in that type of advertising.

When we turn to the company's methods of distribution, we find that it had sought to have its products listed in the catalogs of as many distributors as possible. Most of these distributors, however, exerted no positive sales efforts on Neyer tools and only one-half of the distributors who listed the tools in their catalogs carried them in stock. Since many customers required immediate delivery, the listing of the tools without the carrying of stocks was of doubtful advantage.

One segment of the company's market was in mills and factories where the tools could be used for repair work. The demand from that source had been sporadic; potential users oftentimes had waited until the tools were urgently needed before placing orders. If immediate delivery could not be secured, substitute methods frequently were employed and sales were lost to the company.

It does not seem that it was necessary to have permitted this demand to remain sporadic in character. In every factory emergency repairs have to be made from time to time, and the idea of preparedness for emergencies should have constituted a sales appeal on which sales could have been built so as to render the demand less sporadic in character. The fact that the tool and its attachments had multiple uses gave an opportunity for making this appeal more broadly than it could have been made by a manufacturer of a single-purpose tool. In garages and repair shops, furthermore, tools such as those made by the Neyer Tool Company were of such utility that they should have been

sold as regular shop equipment. From this analysis the conclusion is to be drawn that the company missed an opportunity to promote its products beyond the sporadic demand stage.

When we turn to questions of distribution, it is apparent that the company could not economically have sold its products directly to users. This conclusion is based not only on the results of the company's experiments in direct selling, but also upon the characteristics of the demand. So long as much of the demand was sporadic, direct sale was not practicable. Even if the demand became regularized, moreover, the infrequency of repeat purchases and the rather small amount of the average unit sale were unfavorable to direct selling.

Despite the impracticability of direct selling, educational sales effort, nevertheless, was needed. The tools were not indispensable to users. Their usefulness was not self-evident. And there naturally was a tendency for potential customers to defer action until an urgent need was felt, when perhaps it was too late to secure delivery. In these circumstances lay the opportunities for sales promotion. If the company could not sell direct, then it had to rely on advertising and on its distributors to promote sales.

So far as the distributors were concerned, by inducing every distributor to list Neyer tools the company removed all incentive for any one distributor actively to promote sales. It seems to me that the company should have given careful consideration to a plan of selected distribution whereby the distributors chosen to handle the tools would have been sufficiently protected from direct competition to induce them to go further in selling than merely to list Neyer tools in their catalogs. The company, furthermore, probably should have employed salesmen to visit the distributors periodically to make sure that each had adequate stocks, to guide them in promoting sales of Neyer tools, and to generate the interest which arises from personal acquaintance. At all events, it does not seem that the company was warranted in continuing to grant its regular discounts to distributors who were not carrying stocks of Neyer tools even though they listed those tools in their catalogs.

This discussion of the company's past experience leads to the conclusion that the marketing methods needed to be changed. It was more difficult and more expensive to make these changes in 1927 than it would have been to adopt a permanently effective marketing plan before competition became so keen. Nevertheless, the company was confident that a large potential market existed, and that would justify the adoption of an aggressive marketing plan, with products fully adapted to users' needs, new sales strategy, revamped advertising methods, selected distribution, and personal salesmanship for dealing with distributors.

November, 1927 M. T. C.

Nerlan Company[1]

MANUFACTURER—TURRET LATHES AND PNEUMATIC TOOLS

Sales Organization—*Segregation of Sales Force by Lines of Products.* In order to reduce the cyclical fluctuations in its sales, the company, a manufacturer of turret lathes, began to manufacture a line of pneumatic tools also. At first the company had the same salesmen sell both lines. Later, however, the company decided that it would be more economical and satisfactory to use separate sales forces; customers and buying habits for the two lines were different; different technical information was required for each; and one line was much less expensive than the other.

(1924-1927)

The Nerlan Company was one of the largest manufacturers of turret lathes in the United States. Its annual sales volume generally ranged between $2,000,000 and $4,000,000; in an average year sales of machines made up 62% of the total volume and sales of tools and attachments, 38%. Between 1915 and 1923, the sales volume as measured by labor-hours for three-month periods fluctuated so violently that the high point exceeded the low point by 10 times. Fluctuations in sales as measured by dollars were even greater. In 1924 the company was offered the patent rights on an improved pneumatic tool. It decided to add this new line chiefly because it expected thereby to decrease the extreme fluctuations in sales. The company had to determine whether to have the lathe salesmen also sell the air tools or whether to establish a separate sales force for them.

Turret lathes were designed to meet the needs of manufacturing companies which produced on a larger scale than job shops but which did not produce in such large quantities as to justify the use of single-purpose, purely automatic machinery. Turret lathes were capable of handling a great variety of work with low set-up time and were most economical when 5 to 500 pieces were made in duplicate at the same time. The company manufactured for its lathes several hundred tools and attachments which were used for drilling, reaming, turning, boring, chamfering, and cross facing, and also for chucking, bar, cross slide, and similar work.

[1] Fictitious name.

The sales manager of the Nerlan Company estimated that there were in the United States about 12,000 possible customers for turret lathes; they were chiefly iron and steel manufacturers, automotive and airplane companies, railroads, shipbuilders, and glass manufacturers. In the East and Middle West the company sold directly to the users of lathes. It had established 11 district sales offices for this purpose. Stocks were maintained only in Detroit, where manufacturers were accustomed to immediate delivery, and in Chicago, which was a purchasing center for many manufacturers in the Middle West. About $50,000 investment was represented in the stocks of each of these district offices. In some districts, such as Philadelphia, prospective customers usually preferred to see the machines before purchasing; but local stocks were unnecessary because the company was able to show buyers Nerlan lathes in use at the plants of former purchasers.

In the South and on the Pacific Coast the company sold through 9 dealers, who either bought outright or sold on consignment. Stocks of these dealers ranged from $10,000 in some instances to $20,000 in others; larger stocks were necessary in the West, where shipments required several weeks for delivery, than at points nearer the factory. The dealers sold no competing lathes, but carried machinery of 15 to 20 other manufacturers. They received a commission or discount of 12½% of the prices to users. The expense to the Nerlan Company of furnishing demonstration and service salesmen in these territories usually amounted to 3% to 5% of sales. Total sales expense for the territories equaled 18% of sales, not including home-office engineering expense and home-office overhead.

The company employed 35 salesmen, all of whom had taken at least a 2-year training course in the plant. They were paid salaries, large enough for bare living expenses, plus commissions on sales above their quotas; the quotas and commissions varied according to the men and the districts in which they worked. Yearly earnings per salesman ranged between $2,400 for junior salesmen and $10,000 for the best senior salesmen, with an average around $6,000 or $7,000.

Nerlan turret lathes were stated to be 10% to 15% higher in price than the machines of the company's six competitors. The company's prices, which were quoted f.o.b. factory, ranged from $545 per machine to $6,000 per machine. The best selling ma-

chines prior to 1923 were priced at about $1,500, but since that time somewhat more expensive machines were being bought more frequently; the great majority of orders received were for one or two machines.

Negotiations for a sale usually involved several calls spread over a number of months; sometimes a year or more was required to consummate a sale. Relatively few prospective customers were familiar with the performance of modern turret lathes. The salesmen emphasized the durability and the accuracy of Nerlan lathes, the short set-up time required, and especially the increase in net profits which their use could effect. If a prospective customer wanted specific data as to rate of production and costs, blue prints and descriptions of the customer's processes and materials were sent to the home office, where detailed and accurate engineering estimates were made.

The company employed six service salesmen or demonstrators. All of them had at least a four-year apprentice course at the plant. Their main function was to demonstrate to customers' mechanics, after the machines had been installed, proper methods of using the machines; usually this required two or three days for each new customer. Demonstrators also made repairs which were too complicated for the users' mechanics or for the company's salesmen. No charge was made for what was considered a reasonable amount of repair service unless the breakdown was clearly the fault of the user. Even then, however, if the user insisted it was not his fault, the company bore the cost. When a customer was charged for service, he was done so at the rate of $15 a day; but such cases were negligible. When lathes needed overhauling, they were sent to the Nerlan factory and completely reconditioned at the owner's expense. Six to ten years without reconditioning was considered the normal life of a Nerlan lathe in constant use.

The demonstrators traveled from the home office. The sales manager stated that central control of service was superior to direction from district offices, because under a centralized plan the time of the men could be utilized better and because the company was in a better position to learn from the service men the experiences of its customers and the good and bad points about its machines.

The Nerlan Company experienced decided year-to-year fluctuations in sales and profits. The periods of low sales volume

were unusually long because, as the sales manager explained, demand for equipment was one of the first to decline in a period of depression and one of the last to revive during a time of expanding business. The volume of the company's sales of tools and attachments for lathes, however, had shown much less variation than the sales of lathes themselves. Although the company was not able to obtain any figures on the sales of portable pneumatic tools, it was believed that sales of portable tools were not subject to serious fluctuations. In order to reduce variations in its own sales, therefore, the company began manufacturing, in 1924, a line of portable air tools for grinding, drilling, buffing, and sanding, to be used for heavy production purposes. It was thought also that the addition of this new line would make it unnecessary during periods of slack business in the lathe line to drop salesmen, designers, and other specially trained employees.

It was decided to have the turret lathe salesmen handle the air tools. The lathe salesmen were good mechanics and could grasp the technical details of air tools with a few weeks' study at the factory. Although no analysis of the various uses and the possible customers had been made, it was expected that the purchasers of turret lathes would become the chief buyers of air tools. The contact which lathe salesmen had would simplify introduction of the new line. It was expected, furthermore, that the time of the salesmen could be better utilized by having the two lines.

After a short period of experimenting with construction of the air tools, the company introduced them to 75 or more manufacturers with which it already had good connections. These companies were located in a relatively narrow area. It was anticipated that their testimonials would be of substantial aid in making further sales.

Among these first customers there was considerable complaint about the performance of the Nerlan pneumatic tools. Some of this dissatisfaction had been expected because the tools were manufactured in a new way and had not been tested in actual industrial use. But the company realized that it could have saved itself from much ill will if the tools had been introduced to a smaller number of users. Consequently, whenever the company introduced an additional type of air tool, it had one of its factory engineers spend several weeks in the plants of a number of customers experimenting with the new tool. Improvements were made ac-

cording to his suggestions and about 25 tools were made for sale in restricted territories. Results were carefully checked by salesmen, and if further improvements could be effected, designs of the tools were changed accordingly before the tools were produced in large quantities for general distribution.

After a year or more the company decided to employ a separate sales force for the air tools. The lathe salesmen were not prejudiced against selling air tools; but the small unit of sale did not appeal to them, even though commissions on air tools were relatively higher. The average price of Nerlan air tools was about $120, which was slightly less than that of most of the tools manufactured by the company's six or seven national competitors. Furthermore, the salesmen did not like to spend time in demonstration; it was estimated that in 90% of the cases, the approval of the actual users of the pneumatic tools was necessary before works managers would give their approval.

The attitude of mind of the lathe salesmen affected the sales of air tools in two other ways. In the first place, somewhat different personalities were required for selling the two types of equipment. Lathes were purchased by higher executives, such as superintendents, engineers, plant managers, and sometimes vice-presidents and presidents. A salesman ideally suited to sell to these men generally either did not like to negotiate with mechanics, foremen, and other minor plant executives, or could not negotiate with them very successfully. In the second place, the lathe salesmen had been accustomed to limiting their calls to companies which were reasonably good prospects. Because the gross margin on lathes was nearly always less than 20%, selling expense had to be watched with especial care; this expense, it was stated, had to be kept below 12½% in order to make operations profitable. On portable tools, however, the company obtained gross margins ranging between 45% and 55%. These wider margins allowed more promotional work; and because the air-tool business was in the developmental period, the sales manager encouraged a great number of calls even though he realized that many of them would not be immediately productive.

The sales manager, therefore, considered that lathe salesmen were too high-grade men for air tools. Satisfactory air-tool salesmen could be given sufficient technical training in two or three months and could be employed for $3,000 or $4,000 a year.

Another reason for segregation was that the knowledge of the construction of the tools and their uses would become burdensome to the lathe salesmen as the line was expanded.

Establishment of a separate sales force was considered advisable for the additional reason that, contrary to expectations, lathe customers did not turn out to be the chief purchasers of air tools. It had been expected, for instance, that 70% of the grinders would be sold to lathe users, whereas it turned out that only 35% were sold to them; an even smaller percentage of drills were sold to lathe users. Nevertheless, the geographical location of the air-tool buyers was about the same as that of lathe users. The Nerlan Company concentrated on the larger manufacturers because it anticipated that sales to them would be larger in proportion to effort; it was estimated that 90% of all tools of all manufacturers were sold to 10% of the buyers.

By the winter of 1927, after the company had been selling small tools for several years, it had come to the conclusion that fluctuations in the sales of air tools did not vary much from those in the sales of turret lathes and attachments. Although the volume of the air-tool business had been increasing greatly, it did not increase so rapidly as it should have, in the opinion of the sales manager. The volume in 1927 was 50% greater than in 1926; but the sales manager believed that the increase probably would have been 100% if manufacturers in general had not decreased the volume of their purchases of equipment in 1927. That the year 1927 was not so good as 1926 from the standpoint of equipment sales was shown by the fact that the company's lathe business decreased appreciably during this period.

The sales manager believed that it was possible that the sales volume of air tools might fluctuate even more widely than that of lathes. During periods of depression, manufacturers were desirous of reducing costs. It was relatively easy to show how turret lathes could do this. Processes performed with lathes were generally standardized; the material worked on was relatively uniform; time studies could be made with accuracy. But with air tools, on the other hand, the processes were performed on materials less uniform; for instance, the time required for the same task on different castings of the same material would sometimes vary as much as 20% or 30%. Thus, a manufacturer who might be induced to buy a lathe, would not so likely buy new air tools;

he would probably keep the old ones in use until they were beyond repair.

COMMENTARY: The primary objective of the Nerlan Company in adding pneumatic tools to its line was to lessen the fluctuations in its volume of sales. That objective was not attained. Such profits as the pneumatic tools yielded were direct earnings rather than a lessening of expenses incurred for the lathe business.

The company did not accomplish its primary object because the fluctuations in the sales of pneumatic tools proved to be much the same as the fluctuations in the sales of lathes. Therein the company's experience coincided with that of the Glen Tool Company, whose sales of electric tools to large users showed heavy cyclical fluctuations.[2] This case is significant in the first place, therefore, because of the evidence that it furnishes regarding the effect of business depression on the demand for equipment. It logically is to be expected that purchases of new plant equipment should be curtailed more severely than the purchases of other commodities in periods of depression,[3] and this case supports that conclusion.

The second point on which the company did not attain the results that it had anticipated was in economy in selling. Its attempt to have pneumatic tools sold by lathe salesmen was not successful. This experience also was in accord with that of numerous other manufacturers.[4] The differences in the technical uses of the two types of equipment and the differences in the classes of customers for these types of equipment resulted, as usually is the case, in the segregation of the sales force.

This case supports the general conclusion that when a new product is added to a manufacturer's line, different in character from the products previously sold, the new product should be expected to yield a profit on its own account. Unless a careful and thorough investigation has proved beyond reasonable doubt that the new product will bear a joint share of previous costs, it should be expected to carry a full load of marketing expense.

January, 1928 M. T. C.

[2] See Glen Tool Company, page 44.

[3] Melvin T. Copeland, *Principles of Merchandising*, page 137.

[4] Tinkham, Littell, Incorporated, 1 H.B.R. 352; for commentary, 2 H.B.R. 507; Fishback-Harris Company, 2 H.B.R. 114; American Locomotive Company, 3 H.B.R. 149; Baxtam Machinery Company, page 233; American Conveyor Company, page 226.

American Conveyor Company[1]

MANUFACTURER—CONVEYOR SYSTEMS

Sales Organization—*Segregation of Sales Force by Lines of Products.* When the company, a manufacturer of cranes, began the manufacture of overhead monorail systems, it had the same salesmen sell both cranes and monorails. Because a different sales approach was needed for the two types of products and because the salesmen tended to concentrate their attention on the cranes, with which they were more familiar and from which they could obtain greater earnings, this method of selling was unsatisfactory. The company decided, therefore, to segregate its sales force and have different salesmen for the two lines.

Sales Organization—*Agents Utilized in Preference to Direct Selling.* The company, a crane manufacturer which had begun the manufacture of monorail conveyor systems, after two years' unsuccessful experience with having the same salesmen sell both types of products, established a segregated sales force for selling the monorails. Because of the frequency with which the salesmen underestimated the cost of installing the systems, the carelessness with which they made the installations, and their high traveling expenses and poor utilization of time, this method of selling was unsatisfactory. The company decided, therefore, to sell its monorail systems by agents.

(1919-1926)

The American Conveyor Company, in 1919, began manufacturing an overhead monorail system for hoisting and conveying loads weighing 4,000 pounds or less. The system was a combination of rail, fittings, and carriers and was for use in warehouses, foundries, machine shops, textile and paper mills, and similar plants. The chief business of the company was the manufacture of cranes. The new line was added in order to utilize plant capacity made idle by the cessation of production of munitions.

In the beginning the crane salesmen were required to sell the monorail systems also. After two years of unsuccessful experience in having the same salesmen sell both lines, however, the company found it advisable to segregate the sales force. But the new method did not prove to be satisfactory either; so, in 1924, the company was again faced with the problem of changing its selling methods.

In 1919 and 1920, when the monorail system was being intro-

[1] Fictitious name.

duced, the sales volume was smaller and the losses were heavier than had been anticipated by the company. The sales manager attributed this chiefly to the policy of having the same salesmen sell both lines. In the first place, he pointed out that a different sales approach was needed for the two types of products. The uses and advantages of cranes were generally recognized. They were designed for loads of from 5 tons to 500 tons and usually were considered major equipment; they were erected under the plans and directions of engineers. The crane salesmen were seldom taken into the carrying problems of the users; therefore, they needed little technical knowledge beyond that concerned with the construction of the crane itself. Monorails, on the other hand, were designed to carry light loads. This system generally had to be adapted to buildings and methods of routing material already in use. The first job of a monorail salesman was to convince the customer that the monorail system was superior to the method of handling material then in use. His second task was to plan the erection and to estimate the cost of the system. About one-half of the customers wanted prices quoted installed, in which cases the final task of the salesman was to plan and supervise the installation of the monorails. The actual work of installation usually was done by local erection firms.

The second reason for the low sales volume, in the opinion of the sales manager, was the natural tendency for salesmen to concentrate their attention on the cranes, with which they were thoroughly familiar and from which they could obtain greater earnings. Moreover, the chief purchasers of cranes, the largest group of which were steel mills and foundries, did not turn out to be the chief market for monorails, as the company at first had expected.

The company therefore began putting on salesmen in 1921 especially trained for the sale of monorails. By 1923 it had established eight district sales offices in the chief industrial centers north of the Mason and Dixon line and east of the Mississippi River. In addition, two salesmen traveled from the home office to cover the South and the West.

For each district office the company employed one salesman. He was allowed 7½% commission on the invoice price of the monorails; the invoice price was the price at which the product was charged to the salesmen. Quotations on erected systems usually exceeded those on the product f.o.b. factory by about 80%.

For erections, customers were charged 10% of the actual or estimated cost. Of this, 7½% went to the salesmen and 2½% to the company. When the purchaser preferred to erect the system himself, the price quoted was the invoice price plus 7½%. In such instances, the customers usually had an engineer from the American Conveyor Company supervise the erection; for such service a customer was charged $22 a day, plus the railroad fare of the engineer. The expenses of installations, of the salesmen, and of the operation of the branch offices were paid by the company.

Although sales in 1923 almost doubled those in 1922, and although the sales expense was less, a substantial loss was taken on the year's operation. The sales expense was still considered excessive, and in order to reduce expenses, the management believed that a change in selling methods or policies was necessary. The outstanding weakness of the method in use in 1923 was the frequency with which the cost of installing the systems exceeded the salesmen's estimates. The actual cost sometimes was 50% greater than the amount estimated and charged the customer. It was natural for a salesman in his desire to make a sale to be optimistic about the cost of installation, especially since the cost was borne by the company and not deducted from his commissions. However, the chief cause of discrepancies in the actual and estimated costs, the sales manager stated, was the carelessness and inefficiency with which the salesmen planned the installations. The following examples are typical of the costly errors made by the salesmen. In one case a salesman in erecting the rails overlooked a doorway in his plans and therefore had to change the position of the rails. In another instance, a wall was cut into a place behind which there was a beam; the salesman could have avoided this error by studying the blue prints of the building or by testing the wall. Frequently, the salesmen ordered the wrong size of hangers for the rails or made some other mistake in the order. Not only were such errors immediately costly to the company, but they resulted in dissatisfaction among the customers and hence reduced the company's chance of securing additional orders. Repeat sales, moreover, were the most profitable type because they usually were made with little further sales effort.

The management believed, furthermore, that salesmen's traveling expenses were too high. Usually a sale required three months

from the time of first approach to receipt of order. During the period of negotiation, four or five trips frequently had to be made to the plant. With large territories to cover, these trips were naturally costly.

The salesmen added to traveling expenses and utilized their time poorly by failing to concentrate their attention upon one or two localities at a time. Realizing that the large size of their territories was, in part, the cause of their heavy expenses, some of the salesmen obtained agents to aid them in covering the market. During 1923 and 1924, ten agents were employed. The agents were engineers who generally had been selling allied equipment. They bought the monorail equipment and did the installing on their own account.

The men who determined the purchase of such equipment as the monorail systems were factory superintendents, chief engineers, and production managers. The salesmen of the American Conveyor Company experienced little difficulty in reaching these men. A typical size order was between $2,000 and $3,000, falling in a range of from $100 to $50,000. In 1923 typical sales of a conveyor salesman were about $25,000 as invoiced by the company. The typical expense per salesman varied from $8,000 to $10,000.

There were two major alternative changes which the company was considering making in 1924. One of the officers of the company thought that the difficulty of inefficient and expensive installation could be eliminated by putting the salesmen on a salary, by more careful control, and by redistricting their territories. The sales manager, on the other hand, thought that it would be better to have agents who operated on their own account in a manner similar to that then practiced by the agents employed by the salesmen.

The company decided, in 1924, to adopt the policy of selling by agents. By this method the company was able to rid itself of the outstanding weakness found in the old method. By the end of 1926, the new plan was in full operation. According to this plan, the territory north of the Mason and Dixon line and east of the Mississippi River was divided into 125 districts. The company discontinued selling outside of this territory except in special cases, because business in distant places had been obtained at a loss and because it wished to concentrate its efforts. The 125

districts were determined from data obtained from United States Census reports which gave manufacturing companies by counties. A district averaged about 2,000 plants, but varied according to local conditions. In these 125 districts the company had 62 agents, all of whom had had some training in engineering. They usually had been selling installation goods. It was required generally that they have some capital of their own, but the company agreed to finance a number of promising agents. Each agent established his own office, but in the name of the American Conveyor Company. A majority of them handled the American conveyors alone; and in cases where they handled allied products, these products were incidental to the conveyors. The agents received a payment equal to 20% of the factory invoiced price on the main items, such as the rails and carriers; on small items such as hanger rods, clamps, and buckles, 20% was allowed when purchased in standard packages and 10% when purchased in broken lots. With these payments and the commissions obtained from the customers for erecting the conveyors, the agents were expected to pay all expenses as well as their own salaries. A majority of the agents carried stock, averaging between $1,000 and $2,000.

Before employment, agents were required to take a week's training course at the plant at the expense of the company. In addition, there were 27 salesmen employed by the agents who also took this course. Agents were required to make daily reports, giving the names and addresses of the companies and of the officers approached, and indicating at the same time companies to which estimates had been submitted. From these reports the company was able to build a valuable mailing list; in 1927 the company had 30,000 names on its list. The agents were given sales quotas based on the number and size of companies in their districts. The quota was set low, so that with reasonable effort and efficiency it could be exceeded.

Prices were printed in the catalogs which were provided for customers. A printed discount sheet was furnished to anyone upon request. The practice of publishing a uniform price for each item was thought to induce confidence among the company's customers.

The 125 districts were divided into 10 "contact" districts and were supervised by 7 contact salesmen whose function was to

stimulate the agents and promote sales. Most of the contact men had been district salesmen under the old system. They were paid salaries plus commissions on all sales in their districts. They received 1% commission on sales made in highly developed districts, 2% in districts where the sales were under the quota, and 3% in undeveloped districts. A contact man's commissions frequently amounted to $300 or $400 a year.

Advertising expense was about 5% of sales. In 1926 one-third of the appropriation was spent for trade publications and two-thirds for direct mail; this proportion was just the reverse of that in 1923.

The new method of distribution proved more profitable to the company than the old method and gave the customers few causes for complaint, either as to promptness or manner of installation. The sales volume in 1926 was almost $750,000, or practically four times that in 1923. The selling expense was 12% of sales, which represented a great reduction. Furthermore, the company was able to reduce its prices almost 50%, chiefly because of the improved marketing methods and because of the advantage of large-scale production and standardization.

COMMENTARY: This case provides an example of the problems which arise when a manufacturer adds a new product to utilize excess plant capacity, without carefully ascertaining in advance the marketing methods to be used. The company in this instance achieved notable success with its new product, but it could not adhere to its original marketing plan. In this case the new product was accessory equipment which found a large market in factories already constructed.

The poor showing of the sales of the new conveyors in 1919-1920 was not to be attributed, of course, solely to the attempt to have the crane salesmen sell conveyors; after the crisis of 1920 the purchases of new equipment by manufacturers generally were severely restricted. Nevertheless, the segregation of the sales force for the two types of products was inevitable, if the best results were to be attained. Contrary to the company's early expectations, it was discovered that the chief market for conveyors was not among the firms to which the company sold cranes. The technical problems in selling cranes, furthermore, were different from the technical problems in selling conveyors. For selling cranes, the salesmen needed, chiefly, a knowledge of the machines themselves and of their potential performance; whereas for selling conveyors, the major requirement was that the salesmen should be capable of understanding the adaptability of the conveyor to the pe-

culiar conditions in each prospective customer's plant. These differences, which could have been foreseen, resulted in the establishment of the separate sales force for conveyors.

The experience of the company which led to the supplanting of the conveyor salesmen by agents, shows the difficulty of controlling non-standardized tasks in selling where direct supervision is impossible. The company's decision to shift from salesmen to agents seems at first to run counter to the decisions of several other companies to change from agents to salesmen.[2] No real conflict is involved in these decisions, however, because of the differences in conditions; the American Conveyor Company's customers usually desired to buy the equipment at an installed price, and each installation presented special problems.

Whether the methods adopted by the American Conveyor Company are the only means of solving satisfactorily such a problem as this, it is not safe to venture an opinion. At all events the company's methods were successful after the change to the agency plan. It is to be noted, nevertheless, that the company retained greater control over its agents than often is the practice; it required them to take a training course and to make detailed daily reports of their activities.

The agency plan was adapted to the sale of conveyors for installation in plants already in operation. Eventually, however, the company's market probably will change to one in which sales are made chiefly for new construction and for replacements. Whether the agency plan will be as well suited for that type of market remains an open question.

January, 1928 M. T. C.

[2] For example, see Stetlow-Carroll Company, 3 H.B.R. 37, and Paley Truck Company, page 252.

Baxtam Machinery Company[1]

MANUFACTURER—MACHINE TOOLS, SMALL TOOLS, GAUGES

Sales Organization—*Segregation by Lines of Products.* Chiefly because of the technical knowledge required for satisfactory sale of its products, the company, which manufactured and sold machine tools and small tools and gauges directly to users, segregated its sales organization, having one group of salesmen sell machine tools and another group sell small tools and gauges. The markets for the two groups of products were, in the main, identical. Different officials in the customers' organizations, however, determined purchases of the two groups.

(1928)

The Baxtam Machinery Company, a large manufacturer of machine tools, small tools, and gauges, unlike many of its competitors followed a policy of direct sale to users exclusively. For this purpose, the company maintained 14 branch offices in leading industrial centers in the United States.

From the marketing point of view, the company regarded its business as divided in two parts: machine tools, and small tools and gauges. The potential customers for both groups of products in most instances were the same firms. Nevertheless, the executives were of the opinion that the two groups of products should be sold by different salesmen; and the sales organization was set up to allow for this duality.

All the products of the Baxtam Machinery Company were of high quality. The machine tools, sales of which comprised about half the company's total sales volume, included grinders, millers, lathes, drillers, die sinkers, centering machines, vertical shapers, profilers, and jig borers. Each class of machine included several types and was made in a variety of sizes. These machines were precision instruments and were designed to give extreme accuracy. One type of jig borer produced by the company, for instance, would locate bores and check diameters to one ten-thousandth of an inch.

The following quotation from the company's catalog indicates the variety of technical points involved in a single machine—in this case a jig borer.

[1] Fictitious name.

Distinguishing Features of the Baxtam Jig Borer

1. Locations to ten-thousandths are made by end measures, inside micrometers, and dial indicators, measuring devices which are in common use in every shop and known to every mechanic.

2. Dimensions are set on the machine exactly as they appear on the drawings to which the operator is working.

3. Measuring devices have no connection with table traversing screws; therefore errors in screws, wear, or backlash do not affect accuracy in locating. If either slide is moved, no matter how slightly, the amount shows immediately on the indicators.

4. The Baxtam Jig Borer is a perfect, quick measuring machine for inspecting and checking work done on other machines. The measuring instruments can be checked for accuracy at any time.

5. The vertical construction is ideal for precision work. The direct thrust of the cutting tools is taken upon a horizontal table supported by a heavy, rigid bed. Work holding is simplified and visibility exceptionally good.

6. The spindle head is mounted on a single slide with broad bearing surfaces and with a gibbed narrow guide to maintain accurate vertical alignment. This construction gives no chance for error in raising or lowering the head.

7. The spindle quill has a 9-inch travel, which permits boring deep holes or holes on different planes without disturbing the slide. Long bearings of ample diameter are far apart to assure accuracy.

8. Belt drive to the spindle is very smooth—the actual spindle drive is through special mounting which eliminates all belt pull on the spindle itself.

9. The spindle feed is continuous, which is admitted to be the best type for the fine finishes required in precision work.

10. The single pulley, constant speed drive is very flexible. Gear boxes control the various speeds and feeds. It is an easy matter to arrange for motor drive.

The specifications given for one of the company's lathes were:

Specifications

Range

Length of bed	5′
Center distance, maximum	29″
Swing over bed, with compound elevating rest	11¾″
Swing over carriage, with compound elevating rest	7½″
Steady rest capacity	2½″

Follow rest capacity..... 2½"
Tool post takes tool.....½"x 1 "
Collet capacity .....⅛"x ⅝"
Taper attachment, graduated in both degrees and inches, will turn in any position on bed, maximum taper 20 degrees included angle 12" long.

Headstock Spindle

Bearings, cylindrical, front .....1 11/16"x 3"
Bearings, cylindrical, rear.....1 7/16"x 2½"
Boxes, cast iron, lined with babbitt, adjustable for wear.
Hole through spindle..... 15/16"
Taper hole in spindle collet, No. 6 Jarno.
Front end, conical, hardened and ground; thread, diameter ..... 2¾"
6 pitch, U. S. F.

Tailstock Spindle

Diameter ..... 1⅜"
Travel ..... 5 "
Taper hole, No. 6 Jarno.

Feeds

Carriage longitudinal, 6; per revolution of spindle, .00212" to .0157". Transverse feed, hand only. Micrometer dials graduated in thousandths.

Speeds

Spindle speeds, back gears in (5) r.p.m.....10 to 59
Spindle speeds, back gears out (5) r.p.m.....79 to 461
Cone, 5 steps, diameters, maximum and minimum 7⅛" and 2⅞"
Pulleys, counter friction.....8"x 3¼"
Belt width, cone..... 1½"
Belt width, counter friction pulleys..... 3"
Countershaft speed, r.p.m.....180
Countershaft speed, r.p.m. (reverse).....250

Threading

English lead screw, 6 pitch acme, will cut English threads 1½ to 156 pitch, including 11½ pitch; also metric threads, 13 to .25 mm. P., including .75 and .90 mm. P.
Metric lead screw, 4 mm. P., will cut metric threads, 13 to .25 mm. P., including .75 and .90 mm. P. and English threads, 1½ to 39 pitch, including 11½ pitch.

Floor Space .....75"x 31"

In addition to being familiar with the technical features of the machines themselves, it was necessary for the salesmen to understand the special needs of the prospective customers. The ma-

chine tools were used under diverse circumstances and upon various materials, so that each sale involved new problems. Competition in the sale of machine tools was keen and, in most instances, it was necessary for the salesmen to demonstrate to the users that the performance of Baxtam machines was such as to give lower production costs, with accuracy, speed, and all other factors taken into consideration, than could be obtained from competing machines. Baxtam machines in general were higher in price than competing tools, and the fact that they could not be sold on a price basis made the technical knowledge and service of the salesmen of particular importance. Single machines with regular equipment ranged in price from $500 to $10,000. Special attachments for a machine increased its price by one-third or more.

Baxtam small tools and gauges also were products of high quality, and consequently were higher in price than most competing instruments. The small tools included taps, dies, screw plates, milling cutters, reamers, punches, drills, and miscellaneous tools such as taper pins, lathe mandrels, hand chasers, and forming tools. Each type of small tool included a dozen or more varieties and was made in a large number of sizes. Among the gauges were cylindrical plug and ring gauges, adjustable snap gauges, thread plug and ring gauges, and special gauges for fire hose couplings. In addition, the company made a line of small measuring machines. Orders for small tools and gauges ranged from a few dollars to several hundred or even, in some instances, to several thousand dollars.

The executives of the Baxtam Machinery Company were of the opinion that technical knowledge was required for selling the small tools and gauges no less than for selling machine tools. The general manager remarked that some people might look upon a tap as merely a tap but that such was far from being the case. The tap should be suited to the kind of work upon which it was to be used. In its catalog on small tools, the company, for instance, said of one of its styles of taps:

> The cut shows the principle of the Interrupted Thread in the omission of each alternate tooth, so that each of the teeth is followed by a space, and vice versa. This arrangement gives a freedom of action to each tooth that is impossible otherwise.
>
> In tapping holes in material such as copper and boiler sheets,

the tendency with the standard form of tap is to tear the threads that are being formed, owing to the wedging action of the cutting teeth and the lack of resistance offered by the metal to the pressure of the continuous row of cutting edges; the chips are carried forward in a mass in front of the cutting teeth, and unless the tap is frequently reversed and this mass of chips broken off, the thread will either be mutilated or the tap itself broken.

In tapping out a given size hole the interrupted thread tap removes the same amount of stock as the standard tap, but actual practice shows that the resistance is from 30% to 50% less. This would indicate that the greater resistance with the standard form of tap is caused by friction, which is more destructive to the tap than the wear due in the actual cutting operation.

The same need for special knowledge was also true of the other small tools and of the gauges. A gauge suited for use in measuring parts made of a relatively soft metal, for example, was not suitable for use on parts made of very hard metal, where the wear upon the gauge would be severe.

All manufacturers working with metal were potential customers both for the company's machine tools and for its small tools and gauges. Among the users were manufacturers of automobiles, manufacturers of typewriters, sewing machine manufacturers, and manufacturers of machines and machine parts. Although a majority of the users of one group of the company's products also were users of the other group, the two markets were not entirely identical. Railroads, for instance, used Baxtam small tools but did not use Baxtam machine tools. Hardware retailers and automobile repair shops also were potential customers for the small tools but not for the machine tools. The company, however, did not cultivate those markets assiduously, inasmuch as they generally demanded a lower grade of product. Not only were the markets for the two groups of Baxtam products, in the main, the same, but the small tools often were used in conjunction with the machine tools.

Sales of small tools and gauges ordinarily were negotiated through the purchasing agents of the buyers' organizations, but usually it was the plant superintendents or work managers who specified the type and make of items to be purchased, and it was these individuals whom the Baxtam salesmen for small tools and gauges undertook to interview. The machine tools, on the other hand, were major items of equipment and the general operating executives in the customers' organizations were interested in

their purchase. Stocks of small tools and gauges, but not of machine tools, were carried at the branch offices.

At its 14 branch offices, the company maintained 30 salesmen for machine tools and 40 salesmen for small tools and gauges. At each of the branches there was a branch manager responsible for the sales activities in his branch territory. At each of the 10 most important branches there was an assistant branch manager in charge of small tools and gauges. The assistant manager was directly responsible to the manager but was permitted to supervise the activities of the small tool and gauge salesmen with little interference from the manager. The salesmen were paid small salaries and were given commissions on sales in their respective territories. Out of their commissions they paid their own expenses. In addition to their salaries and commissions the salesmen were paid bonuses based on their achievement of sales quotas which were set for them. The compensation of the salesmen selling machine tools and that of the salesmen for small tools and gauges was, in general, the same. The branch managers receive a small commission on all sales made in the branch territories.

In addition to its salesmen the company had five service men, who were expert mechanics. These men were all employed for work on machine tools, as the small tools and gauges did not require service. The service men traveled from branch to branch. They supervised installations whenever such supervision was needed and were prepared to visit customers in case of serious trouble with a Baxtam machine.

At the company's main office there was a general sales manager and, under him, a sales manager for small tools and gauges. The general sales manager himself directed the sales activities of the machine tool department. The salesmen made daily reports on calls to the branch managers, and those managers, in turn, made reports by letter to the managers at the main office. No schedule or forms were set for the reports of the branch managers. Most of the detailed work of sales force control was carried on at the branches.

Advertising for both groups of products was carried on by the company's advertising manager. The company used trade papers extensively. It also advertised directly by mail and exhibited at conventions and machinery exhibits. About 1% of

gross sales was devoted to advertising. This amount was divided approximately equally between the two groups of products. On its direct-mailing list for each group of products there were the names of 13,000 firms; most of the firms were the same on both lists. The mailing list included more firms than the salesmen called upon.

The company's chief reason, it was stated, for separating the sales forces for the two groups of products was the technical knowledge required for the sale of those products. The executives deemed it inadvisable to burden a salesman with too many diverse lines. In addition, there was the further fact that entirely different groups of individuals in the customers' organizations were interested in the purchase of the two types of products. Small tools and gauges, furthermore, were purchased at more frequent intervals than were machine tools. The general manager also pointed out that a salesman for one group of products in his calls might find leads for a salesman of the other products.

The technical knowledge required by the salesmen also was a reason for selling directly. The company at various times had considered the practicability of using machinery supply firms and other distributors to replace or supplement its direct selling. If distributors were secured for the small tools and gauges it was likely that they would cover the market among hardware retailers and repair shops more thoroughly than it could be covered by the company's existing organization. The company had concluded, however, that distributors would require assistance from the company anyway and that sale through distributors would prove more costly than direct sale in view of the results. The company was of the opinion that its steadily increasing and profitable business justified its policies of direct sale and of segregation of its sales force.

COMMENTARY: The reasoning by which the Baxtam Machinery Company reached its conclusion to segregate its sales organization was clear-cut and conclusive. Although the same companies largely bought both machine tools and small tools and gauges, the same executives within the customers' organizations did not customarily determine the purchases of both groups of products. There was, therefore, in effect a differentiation in the markets for the two groups. The company was selling its products on a performance basis and technical salesmanship was required. This was better obtained by segregating the sales organi-

zation. Finally, there was a difference in the frequency of purchase of the two groups of products, and therefore the routing requirements were not the same for both groups of salesmen. This company had a well-conceived marketing program.

February, 1928 M. T. C.

Symbol Electric Company[1] (B)

MANUFACTURER—MOTORS AND WELDING EQUIPMENT

Sales Organization—*Combined Form Utilized in Preference to Segregated.* After it began to manufacture electrical welding equipment, the company, whose chief product previously had been electric motors, used different salesmen for the motors and for the welding equipment. Later, however, as the need for demonstration and instruction in the use of the welders became less, the company, in view of the fact that the markets for the two lines overlapped to a large extent, decided to have the same salesmen sell both lines.

(1919)

In 1913 the Symbol Electric Company, which had been manufacturing electric motors for more than a dozen years, developed a line of electrical welding equipment which found its primary market as manufacturing equipment among manufacturers of iron and steel products and its secondary market as equipment for repair work in repair shops and marine dry docks. By 1919 the company had 10 branch offices in the middle-western and eastern sections of the United States north of the Ohio River. The sales force of the company was segregated by products, that is, there was one salesman at each branch for motors and another for welding equipment. Early in 1919 it was recommended that the company should combine the sales forces so that each salesman would represent both motors and welders.

The company sold its products through branches in the middle-western and eastern parts of the United States and through supply firms with exclusive territories in the southern and western territories. About 75% of the company's sales of motors were made to about 50 manufacturers of machinery and hoisting equipment who resold the motors as a part of their equipment. The remaining 25% of motor sales were made to users such as factories and mills or to machinery dealers, mill supply firms, and repair shops which stocked motors to meet requirements of customers. Welding equipment was sold to manufacturers of iron and steel products for use in their manufacturing processes and to factories and repair shops which used such equipment in repair work. Unit

[1] Fictitious name. See also Symbol Electric Company (A), (C), and (D), pages 159, 494, and 516, respectively.

prices of welding outfits ranged from $600 to $30,000 and unit prices of motors ranged from $50 to $2,000; the motors ranged in size from ½ horse power to 150 horse power.

The line of electric welders which had been developed after 1913 required educational sales efforts, demonstration, and repair service. Factories which were prospective purchasers ordinarily did not have among their employees men who were familiar with electric welding equipment. The company therefore had trained a salesman for each branch office to demonstrate the use of the welders and to instruct operators. The welder salesmen and motor salesmen at each branch occupied the same office but worked separately. The salaries of motor and welder salesmen ranged from $150 per month to $400 per month, depending on length of service with the company and sales ability.

Motor salesmen were expected to maintain cordial relations with the manufacturers in their territories who purchased motors as equipment for resale. Some of those firms entered into annual contracts with the Symbol Electric Company to purchase all the motors required during the year to equip the machinery which they manufactured. Others purchased Symbol motors to equip certain machinery and competitors' motors to equip the remainder. Those manufacturers sometimes ordered for outright purchase a definite number of motors. In other instances the Symbol Electric Company shipped to them on consignment a few motors in each standard size and replenished this stock as the resale manufacturers drew from it. Symbol Electric Company motor salesmen were available to offer advice on application of the motors to the machines and to provide for exchange or repair of defective motors. The motor salesmen also visited factories and mills which were prospective customers for motors as plant equipment. Competition in electric motors was keen; a motor salesman had to encounter the competition of over 25 other motor manufacturers on almost every sale. Competing companies frequently could quote lower prices; accordingly, Symbol motors had to be sold on the appeal of their special features.

The company, prior to 1919, sold its electric welders at prices which covered the expenses of a seven-day free demonstration and instruction period to which any purchaser of a Symbol welder was entitled. During the first few years after the introduction of electric welders, the welder salesmen spent approximately 50%

of their time in demonstration and instruction. As competing companies began to make electric welders and as the uses of electric welders became better known, the need for instruction with each sale decreased. The use of welding in shipbuilding and repair work during and after the participation of the United States in the World War gave welding widespread publicity. An increasing body of skilled electric welder operators became available in manufacturing centers, so that a manufacturer who wished to purchase an electric welder could employ an operator without much difficulty. The need for demonstration and instruction on welders was expected to continue to decrease as more electric welders were used and more operators became skilled.

The officials of the Symbol Electric Company recognized that the use of a segregated sales force resulted in some duplication of sales efforts and traveling, since many of the prospective customers for motors were prospective purchasers of welders and vice versa. Although most of the 50 manufacturers who equipped their products with Symbol motors were prospective users of welders, they constituted only a small portion of the potential purchasers of welders. Of the other motor customers of the Symbol Electric Company perhaps 50% to 60% were prospects for sales of welding equipment. The prospective customers for welding equipment, on the other hand, practically were all prospects for motor sales. The executives, such as general managers, engineers, and production superintendents, upon whom motor salesmen called were also the executives to be interested in welding equipment. It frequently had been necessary, however, for the welding salesmen before completing a sale to demonstrate and discuss the welders with additional interested persons such as foremen and skilled operators. The company employed two or three technical experts to assist the welder salesmen on special orders and to advise on new applications of welding.

The company, in the latter part of 1919, decided to combine the sales forces so that the two salesmen at each branch would sell both motors and welders. A few salesmen at first protested at having to become familiar with both lines, but they soon were able to learn the technique and sales appeals for both welders and motors. The company changed its selling terms on welders so that the prices quoted did not include free demonstration and instruction. A customer could obtain instruction by paying a

separate charge for the time spent by a service man or salesman in such work. A majority of the customers after 1919 did not request instruction. Largely through eliminating the free instruction period and economizing by combining the sales forces, the Symbol Electric Company was able to reduce its prices on electric welders 35%. By 1925 only a small amount of service on either motors or welders was requested by customers. Salesmen spent most of their time in sales efforts and when customers reported trouble with a motor, for example, the branch office hired a man from a local electrical repair shop to investigate and the salesman appeared only when the repair man was unable to solve the difficulty. If the trouble was purely the fault of the customer, the Symbol Electric Company sent the repair bill to the customer. More often, however, the company absorbed the repair cost, particularly if any doubt existed as to where the fault lay.

COMMENTARY: This case supports the thesis that generally it is advisable for a company with more than one line of products to sell through a nonsegregated sales force when the persons upon whom salesmen call are, in large part, prospects for the different products of the company.[2] In this case, by having all salesmen handle both motors and welders, the company centered representation in one man who kept in touch with the needs of customers for both types of products. By so doing, buying executives were not confused or bothered by having two representatives of the Symbol Electric Company call, and in turn the Symbol Electric Company was able to economize time of salesmen.

Both lines of products manufactured by the company were highly technical in character, but apparently not so highly technical that a salesman could not master both. When a sale required a high degree of knowledge upon the application of the products, the company's specialists could be called to the aid of salesmen.

Undoubtedly there had been more reason for segregation of the sales force prior to 1919, when a large amount of educational work, installation advice, and service had to be offered in the sale of electric welders. With the increase in knowledge on the part of manufacturers of the possibilities of electric welding and the growth of a force of workmen to handle welding apparatus, however, the need for such extensive missionary work on the part of salesmen was reduced. Accordingly, it became preferable to have the same salesmen keep in touch not only with the needs of the customers for welders, but for motors as well.

July, 1926 N. H. B.

[2] See also Circle Auto Supply Company, 3 H.B.R. 167.

Munro-Cliff Company[1]

MANUFACTURER—PAINT AND VARNISH BRUSHES

Sales Organization—*Reorganization to Avoid Duplication of Sales Effort.* For 17 years after the company had been formed in 1908 from the consolidation of two competing brush manufacturing firms, the selling divisions of the two organizations continued to be operated independently of each other. By 1925, when a new sales manager was employed, the company was in a serious financial condition; sales had decreased because the company's prices were higher than those of competitors and because the company was handicapped by inefficient sales methods and internal friction. The new sales manager reorganized the selling department by combining the two sales forces and thus eliminating duplication of effort, and by introducing customers' records and other measures of sales force control.

(1925)

The Munro-Cliff Company was a consolidation of two brush manufacturing companies, the Munro Company and the Cliff Company, which had been competitors for over half a century prior to 1908, the year in which the consolidation took place. For 17 years after the consolidation, until 1925, the selling departments of the two organizations continued to be operated independently of each other. By 1925, however, internal friction had become so great that a reorganization of the selling divisions was imperative.

As soon as possible after 1908, production facilities had been consolidated in the plant of the Munro Company and the plant of the Cliff Company had been sold. At the time of the consolidation, each company had been selling annually about one-half million dollars' worth of brushes. Of the output of each company between 85% and 90% had been paint and varnish brushes and between 10% and 15% household and toilet brushes. Since all paint and varnish brush companies manufactured similar products of the more popular types, about 50% of the Cliff line was duplicated by the Munro line. The two companies together had been making several thousand different lines; and, since each type of brush usually was made in 3 to 5 sizes, there were 7,000 or 8,000 items in the paint and varnish lines and almost

[1] Fictitious name.

2,000 in the toilet and household lines. The Munro-Cliff Company had continued to manufacture all the lines made by the old companies prior to 1908; the same trade names continued to appear on the handles of the brushes.

Mr. Munro, president of the Munro Company, and Mr. Laflin, president of the Cliff Company, had become co-general managers upon consolidation. These two executives performed all the major administrative functions of the business. Although the financial and production departments had been consolidated, the sales departments remained distinct. Mr. Munro and Mr. Laflin managed their respective sales forces independently; separate sales records also were maintained.

In 1925 the Cliff selling division had six salesmen and the Munro division had three. The Munro division in addition had three sales agents, paid on a commission basis, for the household and toilet brushes. The household and toilet brushes were of exceptional quality and were high in price. Average sales of these brushes were not large enough to support agents without additional earnings; the agents, therefore, carried several allied lines of other manufacturers. Department stores were the most important customers for household and toilet brushes. Substantial sales also were made to drug retailers and wholesalers. Since household and toilet brushes were handled by only one of the Munro-Cliff sales divisions and involved selling and management problems different from those for the paint and varnish lines, the household and toilet brushes were not included in the reorganization which became necessary in 1925.

Practically all the company's sales of paint and varnish brushes were made to hardware wholesalers and to wholesalers of paints and painting supplies. The wholesalers resold to paint contractors and retailers. The salesmen of the two divisions of the Munro-Cliff Company traveled from the home office and sold in practically every part of the United States. Although the salesmen of the two divisions did not sell to the same customers, their territories duplicated each other; none of the salesmen had territories prescribed by the company. The salesmen could go where they pleased and, consequently, sometimes there were three or four salesmen visiting the same city. They were paid straight salaries and were given monthly drawing accounts. Their expenses were not carefully controlled nor were individual expenses

considered in the determination of salaries. Salesmen were supposed to report sales calls but frequently neglected to do so. No customers' records were kept except those in the sales ledgers.

The Munro-Cliff Company did no consumer advertising but spent from $10,000 to $20,000 a year advertising its paint and varnish brushes in trade journals. This amount was considered adequate by the management in view of the many years of successful operation of the two companies and the strong reputation which the uniform good quality of their brushes had established for those products.

Munro-Cliff salesmen saw most of the company's customers only once or twice a year. The common practice prior to 1923 was for each customer to place an initial order in the summer for most of his fall and winter requirements. Fall and winter were the most active selling periods for the paint wholesalers because at those times retailers and contractors were ordering for the heavy seasonal spring business. There was also a slight peak of consumer demand in the fall, when users were purchasing for inside work; this demand, in turn, caused a slight peak in the Munro-Cliff business in the spring. After 1923, however, the practice of buying more frequently and in small quantities became common among the wholesalers.

The company's price catalog listed retail prices; but the company made no effort to maintain them. In fact, it set the retail list prices high so that retailers, if they wished, could sell below them. There were five regular sets of discounts. The discount allowed depended upon the volume of purchases and upon special conditions. The highest set of discounts was given to wholesalers who carried a representative assortment of Munro-Cliff brushes as their main line of brushes. A wholesaler in that class purchased brushes listed at $20.52 a dozen, for instance, for $5.13 per dozen. Prior to 1923 nearly all the company's customers had placed initial orders in advance for from 60% to 80% of their requirements. After that time, however, the trend toward frequent small orders became noticeable. Most of the company's wholesale customers purchased from $1,000 to $5,000 worth of Munro-Cliff brushes annually.

Customers ordering in smaller amounts than those required for securing the maximum discounts received one of the other sets of discounts, the rate depending upon the circumstances of

each case. To illustrate: in sections of the country where it was having difficulty in making sales, the Munro-Cliff Company, in order to get its line established, allowed a higher discount than it allowed for similar purchases in other territories. The company protected large wholesalers who were its regular customers, however, by refusing to grant price concessions to competing wholesalers. Most paint and varnish wholesalers, although each carried only several hundred items, maintained sufficiently wide lines to meet local needs. There were a few large industrial users, such as railroads and steel companies, which purchased directly from the manufacturer. They were quoted prices somewhat higher than those quoted to wholesalers, the differential being maintained to protect the distributors.

For 17 years the two separate sales divisions worked side by side. Mr. Munro and Mr. Laflin operated their respective departments without any particular system, by rule-of-thumb methods. Their task of directing all the major activities of the company as co-managers became increasingly difficult as the business grew. In 1923 and 1924 the company began to lose business, chiefly, it was afterwards thought, because Munro-Cliff prices were from 10% to 20% higher than competitors' prices. The managers deemed their brushes so good and the reputation of the company so firmly established that they could hold their customers regardless of the difference in prices. There were five competitors with national distribution and well over a hundred local paint and varnish brush manufacturers; total sales of brushes in the United States were estimated to be from $14,000,000 to $16,000,000, of which the Munro-Cliff Company was securing 10% to 12%. In addition to its high prices, the company was handicapped by slack sales methods and internal friction. For instance, sometimes it failed to acknowledge orders or demanded cash prior to shipment weeks after an order had been shipped. Such practices created the impression that the Munro-Cliff Company considered itself superior to its customers and above seeking their patronage. Many customers became aware of the internal friction and jealousy that was becoming serious in 1923.

An example of internal competition is afforded by the following incident. Mr. Laflin received a favorable letter from a large wholesaler who was contemplating a purchase of Cliff brushes.

Mr. Munro happened to see the letter and immediately wired a salesman of his division to rush in and get the business. The salesmen also competed between themselves. They did not regard themselves as employees of the Munro-Cliff Company but rather as salesmen of the Munro Company employed by Mr. Munro, or of the Cliff Company, employed by Mr. Laflin.

In 1923 Mr. Laflin died and Mr. Arnold, his assistant, was promoted as co-manager. Two years later the company was in a serious financial position. In the same year, Mr. Munro retired. Mr. Arnold was then left alone as general manager of the Munro-Cliff Company with a demoralized sales force and with decreasing sales.

Mr. Arnold was better suited to handle the production and financial functions of the business than he was to supervise sales. There was no one in the organization available as sales manager. No one who had been with either division could have obtained the cooperation of the other. After spending more than a year looking for a man equal to the task, Mr. Arnold, in the summer of 1925, employed Mr. Swanson as sales manager. Mr. Swanson was 40 years old and was, at the time, manager of a company engaged in a type of business unrelated to the manufacture of brushes. He impressed Mr. Arnold as being an able, likeable, tactful, and firm executive.

Mr. Swanson spent several months familiarizing himself with the customs of the trade and with the specific difficulties of the company. His first move was to eliminate duplication of selling effort. By the spring of 1926 he had divided the country into seven territories and had only one salesman in each territory selling the full line of paint and varnish brushes. Each salesman thought that he had been wronged in the readjustment, but all acquiesced and remained with the company.

Two special salesmen were maintained, one for each line, to call on large customers who would not buy from salesmen who called on their competitors. These customers did not oppose the company's policy of selling to competitors; they objected to buying from a salesman who called on their competitors, however, because they feared that confidential information would reach the competing companies.

Mr. Swanson, after obtaining the confidence of the sales force, dispelled the competitive attitude and created a spirit of coopera-

tion. With this his first and chief task solved, in 1927 he set about meeting important secondary problems. He required salesmen to report each call. Customers' records were started to be kept by states. A maximum was set for the expenses, including salary, of each salesman. A record system of orders and billings by months for each salesman was introduced. Mr. Swanson also held semiannual meetings of the sales force for promoting harmony and discussing problems. Two salesmen had decided to live in their territories instead of at the company's headquarters as before, in order to be able to call more frequently and at less expense upon the wholesalers in the territories. Mr. Swanson was planning to extend this policy to other territories.

The change in the attitude of the salesmen and in the operation of the sales department had become so noticeable that representatives of several companies commented upon it to Mr. Swanson at a convention of paint and varnish wholesalers which he attended in the summer of 1927.

COMMENTARY: The breaking down of the organization and of the marketing plan which the Munro-Cliff Company adopted in 1908 was inevitable. Its weaknesses were so obvious, at least in retrospect, that it would be hardly worth while to record the case, were it not for the fact that analogous situations are continually recurring in the business field and that at the present time there are numerous companies headed for the same fate which befell the Munro-Cliff Company.

The friction between the two managers of the company and between the two sales organizations may appear to have been childish and inexcusable. Criticism is not to be directed toward the individuals, however, but to the plan of operation which resulted in friction, bickerings, jealousies, and, finally, in a serious financial condition. The plan worked at the outset because of the momentum previously acquired by the two companies and because of generally favorable conditions. The plan broke down, however, when subjected to the strain of business depression and changing market conditions. It not only was less economical than the new plan adopted in 1925, but it was not flexible.

The sales methods employed from 1908 to 1925 were typical of those of many companies in other industries.[2] The salesmen picked their own territories, did their own routing, and sometimes three or four salesmen from the company visited customers in a single city. The management of the sales force was lax. The control of expenses was lax. And there was laxity on the part of the salesmen in reporting calls.

[2] See Boden Paper Company, page 283; Antrim Paper Company, page 288; Paley Truck Company, page 252.

Although it is not stated explicitly in the case, it is to be inferred that the reason for loose management of the sales force was the belief that personal relationships between a salesman and his customers were the most important influence in selling, an influence which should not be disturbed by interference from headquarters. That belief presumably was the major reason for not consolidating the sales organizations of the two companies at the time of the merger in 1908. Cordial personal relationships between a salesman and his customers are, of course, essential. But the day has passed when sound sales management plans should be subordinated to the personal influence of the salesman. The salesman's task should be to maintain cordial relations between the company and its customers, not merely between the customers and himself.

The circumstances which precipitated trouble were the outgrowth of changes in business conditions subsequent to the crisis of 1920. Prices fell and in the brush trade, as in so many other industries, wholesalers began to buy for prompt delivery instead of giving seasonal orders far in advance. This is what generally has been termed "hand-to-mouth" buying. In order to meet this condition, an alert, adaptable, carefully directed sales organization was needed. Such antiquated methods as were employed by this company were not capable of meeting the new conditions.

The moral to which this case points, therefore, is not only the need for unified control of sales when two or more companies merge their businesses or when a company has two or more executives of equal standing in the organization. The case also shows the necessity for careful supervision of the sales force and for alertness in sensing changes in market conditions to which the company must make its sales methods conform.

December, 1927 M. T. C.

Paley Truck Company[1]

MANUFACTURER—FACTORY TRUCKS AND STACKERS

Sales Force Control—*Methods of Obtaining.* In order to obtain more adequate control over its sales agents and salesmen, the company, a manufacturer of factory trucks and stackers, adopted the following methods of control: establishment in sales territories of permanent sales offices and telephones under the company's name; payment of bonuses on attainment of quotas; requiring reports from salesmen; development of lists of potential customers; redefining of sales territories; permitting salesmen to hire their own assistants as alternative to redistricting.

Sales Force Control—*To Insure Continuity of Relations with Customers* Salesmen of the company, a manufacturer of factory trucks and stackers, paid their expenses, including those for office space and telephone service, out of their commissions. To avoid the disruption in customer relations which occurred when its salesmen were replaced, the company decided to pay part of the salesmen's office expenses so as to have in each territory permanent office space and a telephone under its own name.

(1927)

The selling organization of the Paley Truck Company, which had national distribution for the factory trucks, portable elevators, and platforms that it manufactured, was completely centralized. There were no branch offices with delegation of responsibility for sales force control; and billings and credits and collections were handled centrally, at the home office in New England. To facilitate deliveries, stocks of standard equipment were maintained in San Francisco, but, with this exception, the system was one of complete centralization. The company's problem in controlling its sales organization was to strike a proper balance between a policy of detailed supervision and one whereby its salesmen and agents were allowed complete freedom in developing their territories. The sales manager stated that at one time the company's salesmen had been practically in business for themselves but that gradually the company had acquired a larger measure of control.

Prices of Paley trucks ranged from $75 to $400 each and prices of Paley elevators ranged from $190 to $990 each. Paley

[1] Fictitious name.

products were protected by patents. The company did not sell on a price basis; its policy was to produce products of the highest quality of material, workmanship, and design, and its prices, consequently, were in general higher than those of competitors. The company's sales in 1926 amounted to approximately $1,000,000.

Paley equipment was used in a wide variety of industries, wherever there were materials to be handled. Some of the materials handled by means of Paley equipment were chemicals and allied products, food and kindred products, metal products, leather and leather products, lumber and lumber products, paper and newspapers, rubber products, textiles, and stone, clay, and glass products.

The company had found that purchases of such equipment as it produced were not controlled by the purchasing agents of the buyers. The purchasing agents might place the orders, but control rested with the plant superintendents, the chief engineers, the works managers, the production managers, or, in the case of small firms, with the proprietors. The company's salesmen frequently experienced difficulty in getting by the purchasing agents to the men who actually determined what equipment should be purchased.

The company's trucks were standard and consequently could be made for stock. The portable elevators, on the other hand, were made to order. For its trucks, the company offered customers a free trial period of 30 days, and almost half its sales of trucks were made on that basis.

Paley products were not highly technical and, as a rule, little engineering service was required by customers. There were three engineers at the central office, however, who were prepared to design special equipment and to give technical advice to actual or prospective purchasers.

Actual selling of the company's products was carried on by 44 sales agents, each of whom was credited with all sales made in his territory. Fourteen of these agents, located in the larger cities, sold only the company's products and were in reality company salesmen. Ten of the other agents were manufacturers' agents who sold one line in addition to the Paley line; and the other 20 were manufacturers' agents who sold two or more additional lines. The additional products sold by the agents in every case were items of factory equipment, such as steel shelving, lockers, elec-

tric trucks, and castors, purchased by the same type of firms that purchased Paley trucks and elevators. The manufacturers' agents were employed in territories where sales of the company's products were insufficient to warrant the employment of salesmen exclusively for the Paley line.

The Paley Truck Company advertised extensively in business journals and trade papers and by means of direct-mail circulars. This advertising was not expected to bear the burden of selling. It was to pave the way for the salesmen and agents and to stimulate inquiries which could be turned over to them. For direct-mail advertising, the cost per inquiry received was from $12 to $35; for magazine advertising the cost averaged $23 per inquiry; in the case of some trade papers the cost had been over $100 per inquiry. The company estimated that for each two hundred pieces of direct-mail material sent out it received one inquiry, and that over a period of a year about one-third of the inquiries resulted in orders.

The general sales manager of the Paley Truck Company was of the opinion that the first step in sales force control lay in employing competent men who were capable of exercising initiative in the development of their territories. The next step in control, in his opinion, lay in the method of compensation. All the Paley agents were paid on a straight commission basis. From their commissions the manufacturers' agents met all their expenses. In the case of the salesmen selling only the Paley line, the company bore the expense of telephone service and half or more of the expense for office or desk space.

At one time the company had required the salesmen, like the manufacturers' agents, to pay all their own expenses. The change had been made in order to increase the company's control and to insure continuity of relationships with customers. Previously the salesmen had tended to make customers for themselves rather than for the company, so that when it was necessary to change salesmen in a territory there was a break in the company's contacts. With permanent office space and a permanent telephone number, in its own name, the company believed that this difficulty was largely avoided.

In addition to their commissions, the company paid its sales representatives bonuses based on fulfillment of sales quotas. At the beginning of each year a sales quota was set for the United

States as a whole. Ordinarily the quota allowed for a normal yearly sales increase of 10%. This total quota was broken down by territories chiefly on the basis of the number of industrial firms in each. Each salesman or manufacturers' agent who reached his quota for the year received, as a bonus, 5% of the total amount of his commissions for the year, provided the quota for the country as a whole also was reached. Otherwise, he received a bonus amounting to 2½% of his commissions for the year.

The sales representatives were rated each month on the basis of actual sales as compared with sales quotas, both for the current month and for the year to date. Contests were conducted, from time to time to encourage the sales representatives to achieve their quotas. Annual earnings of Paley representatives ranged from $1,000, for the men handling additional lines, to $10,000, for men selling the Paley line exclusively.

In addition to control of sales force through selection of men and method of compensation, the general sales manager deemed it necessary to have some direct means of determining whether a salesman was covering his territory adequately. This control was provided by means of a list of prospective customers for each territory compiled and kept up to date at the central office. Such a list first was compiled by the company in 1919. Prior to that time the company's sales representatives had been practically free lances. In 1919 the sales manager spent eight months drawing up a list of 40,000 firms which were potential customers for Paley products. The list was compiled from *Dun's Reference Book, Bradstreet's Ratings,* other rating books, and business directories and included only firms which were of a size and type that made them potential users of equipment such as the company manufactured. As a result of this analysis, territorial lines were redrawn and in some cases territories were divided. For instance, at that time, one man had for his territory Rhode Island and all of Massachusetts east of Worcester. It was apparent from the number of potential customers found in that area, as well as from the inquiries received at the central office from firms located there, that one man could not cover the territory adequately. The territory was split between two men, therefore, with the result that each man soon was earning twice as much as the one man previously had earned. In 1925 the territory was redivided between three men, and again each man's sales soon were double

the sales of either of the two men in the territory prior to the change. This also had been the company's experience elsewhere. In general the company undertook to have not more than 2,000 prospective customers to a territory in addition to the firms which already were customers.

Before the company divided a territory, the salesman or manufacturers' agent in the territory was given an opportunity to place an additional man there himself. If he wished, the salesman or agent employed the assistant and made whatever arrangements he liked as to salary. No additional expense was borne by the company. If the salesman or agent did not wish to employ an assistant, the company redivided the territory and secured an additional representative.

In addition to the prospect list compiled at the central office, the company maintained for each territory a prospect list of firms upon which its representatives had called. The salesmen were required to report all new calls to the central office, classified according to whether the firms called upon were using competing equipment or were not using such equipment at all. The manufacturers' agents were expected to make such reports also, but they frequently failed to do so. From time to time the sales manager checked these salesmen's prospect lists against the prospect list which he compiled. The salesmen's prospects were circularized about four times a year. In this advertising a different appeal was addressed to each class of prospects. For those which had not as yet made use of trucks or portable elevators the appeal primarily was one of labor saving and economy through speed, whereas to users of competing equipment the particular advantages of Paley products were emphasized.

The sales manager maintained for each territory a monthly record of sales classified by products and according to whether the sale was repeat or new. Over a period of 10 years, approximately half the sales of trucks were repeat; that is, were made to firms which already had purchased Paley trucks. Purchases for replacements were rare, since the life of the trucks was almost unlimited. Repeat orders for elevators were less frequent than for trucks.

In the summer of 1925, in order to ascertain whether the measure of sales control exercised by the central office was resulting in adequate coverage of its territory, and also to ascertain the effect

of more intensive and more definitely controlled solicitation of orders, the company conducted a survey of four of its markets: Detroit, Cleveland, Chicago, and Philadelphia. The company's representatives in Chicago and Cleveland sold only the company's products, whereas the representatives in Detroit and Philadelphia sold other lines as well. Lists of potential customers other than those on the salesmen's prospect lists were prepared for the four territories. Four men were employed to call upon the firms listed and to make a report on each. These men were expected to serve both as investigators and as missionary salesmen. They were paid salaries and expenses and their routes were carefully planned. The survey required four months. Few sales could be attributed to the calls of these men, and, in the company's opinion, their reports on the firms upon which they called showed that under the system of control in effect the territory was being adequately covered; apparently the salesmen were finding the live prospects.

COMMENTARY: The chief features of the sales practices of the Paley Truck Company which call for comment are the combined use of salesmen and manufacturers' agents, the commission method of paying salesmen, and the gradual assumption of control by the company over the activities of its salesmen.

The company had worked out carefully its assignment of territories and employed agents selling other lines only in those territories in which the potential demand was not adequate to support salesmen selling merely trucks and portable elevators. This was a logical plan on which to employ manufacturers' agents.

The company's original reason for paying the salesmen by means of commissions presumably can be ascribed to the fact that prior to 1919, or thereabouts, the salesmen selling only Paley products were looked upon as having practically the same degree of independence that the agents had. Without a substantial degree of control over the activities of its salesmen, the company could not have paid them economically otherwise than by means of commissions. Whether the company will continue to find the commission method of payment satisfactory, as it undertakes to guide its salesmen more and more intimately in the cultivation of prospective customers and in the handling of negotiations, remains problematical.

The especially significant development in this case is the course which the company followed in assuming gradually a greater degree of control of the salesmen's operations. At one period the company's salesmen were operating with almost complete independence, looking

upon their customers as their own customers rather than as customers of the company, a condition which still is especially prevalent among companies marketing industrial goods.[2] The Paley Truck Company proceeded diplomatically to change this condition without arousing antagonism from the salesmen. By paying telephone expense and a share of the office rental for each salesman the company began to place its name ahead of the salesman's name in each local territory, but accomplished this move without stirring up resentment.

By establishing quotas, with a bonus for excellence in performance, the company secured recognition of its prerogatives in estimating the potential demand in each district; and the offer of the bonus removed the danger of serious opposition. The preparation of the list of prospective customers furnished specific facts which a salesman or an agent had to face, and with such facts at hand the territories could be realigned without serious friction. By permitting a salesman to employ an assistant at his own expense, if he chose to do so, the company provided for more intensive saleswork without assuming a dictatorial position. The requirement that salesmen should report their calls on new prospects was a further step in extending the control of the company; these reports would furnish information on which the company's next move could be based.

The procedure of the Paley Truck Company offers a fruitful example which could be followed to advantage, at least in a general way, by numerous manufacturers of industrial goods whose salesmen are still operating in a highly independent manner.

December, 1927 M. T. C.

[2] See Boden Paper Company, page 283; Antrim Paper Company, page 288; Munro-Cliff Company, page 245; Erven Leather Products Company, page 3.

J. P. Shaftesbury Company[1] (A)

MANUFACTURER—PACKAGING MACHINERY

Salesmen's Compensation—*Salaries Paid in Preference to Commissions.* The company, a manufacturer of packaging machinery, decided to change its salesmen from a commission plan of payment to a straight salary plan. Under the commission plan the salesmen's earnings had been irregular. The salary plan, moreover, would permit the company to quote delivery dates satisfactory to the factory without fear of arousing the salesmen's resentment.

(1922)

In 1922 the president of the J. P. Shaftesbury Company proposed to change the company's salesmen from a commission plan of payment to a straight salary plan. This proposal was not made with a view to increasing or decreasing the compensation received by the salesmen, but was made in the belief that, for the company's business, a salary method of payment was the more suitable.

The J. P. Shaftesbury Company manufactured automatic and semiautomatic packaging machinery, including machines for forming paper boxes and cartons, and for lining, weighing, filling, and sealing the packages. The machines ranged in price from $250 each to $3,750 each. In general, each machine performed only one of the operations involved in packaging, so that a user ordinarily required several machines. Examples of materials packaged with Shaftesbury machines were: baking powder, cleaning powder, arsenate of lead, sugar, dental powder, drugs, insecticides, malted milk, tea, coffee, cereals, and shoe eyelets. Only manufacturers producing in large quantities could make economical use of the company's machinery; the sales manager stated that there were not more than a few thousand potential users in the United States.

The life of the company's machines was long, so that orders for replacements were few. Repeat orders, however, formed about half the company's business. Since a repeat order ordinarily resulted from growth of a customer's business, there usually was a long period between the original order and the repeat order.

[1] Fictitious name. See also J. P. Shaftesbury Company (B), page 335.

The company's sales from month to month were extremely irregular. In one week, two or three firms with which the company had been carrying on negotiations for several months might place orders, whereas in another week no orders might be placed. Moreover, at times certain departments in the factory would be operating at capacity with orders for months ahead, while other departments would be comparatively inactive or idle.

Although the company in a few instances leased its machines, its usual terms were 30 days net from date of purchase. The company employed two installation engineers, who supervised installations without charge to purchasers. All installations were made on a trial basis. If, within 30 days from date of installation, a prospective customer became dissatisfied with the machinery, he could return it to the factory. In view of the trial basis on which its machines were sold, it was necessary for the company to exercise especial care to avoid having them installed in plants where they could not be used effectively. Removal of machines after installation was infrequent.

All the company's sales were made directly to users by four salesmen and the sales manager. One of the salesmen had headquarters in Chicago, one in Cleveland, one in Oakland, and one in New York City. These men were experienced in selling the company's products, and the company allowed them freedom in planning their visits and in caring for the company's interests in their territories. They were expected to make reports to the sales manager on visits to prospective customers. Each inquiry received at the central office was referred to the salesman in whose territory it originated. At least two follow-up letters were sent to the prospective customer from the central office, and copies of these letters were furnished the salesman. The sales manager maintained a card file of prospective customers. On the cards, information was given as to the particular machinery in which the prospective customer was interested, salesmen's calls, and other pertinent data. The sales manager used these cards in supervising the salesmen's activities.

Each salesman was expected not only to be thoroughly acquainted with the technical aspects of the company's machinery, but also to be able to assist customers with their packaging problems. For instance, a salesman must be able to demonstrate to a prospective customer the relative costs involved in using each

of several possible types of packages from the point of view of material required for the packages, machinery needed, and freight and shipping requirements. The salesmen also must be prepared to design suitable packages, to advise as to plant layout, and to show savings which could be realized by use of automatic machinery as compared with hand packaging. In the sales manager's opinion, a man, to be a good salesman of packaging machinery, must have considerable initiative and ingenuity. One salesman, for instance, who had been unable to make a sale to one prospective customer because that customer used paper bags which would not stand erect, and hence were unsuitable for use with automatic machinery, finally made the sale by devising a metal contrivance to hold the bags erect while they were being filled. Another salesman, by planning a conveyor attachment for the packaging machinery, was able to make a sale.

The sales manager stated that in selling the company's machinery it was necessary to satisfy four officials, each with a different point of view, in the customer's organization. The president or treasurer must be convinced that a satisfactory return would be made on the investment; the production manager, superintendent, or chief engineer must be convinced that the machine would have satisfactory production; the man in charge of the mechanical department must be satisfied that the machine would operate with a minimum of expense for upkeep; and the purchasing agent must be satisfied as to price and delivery. In some organizations several of these positions were occupied by the same man, but in any case the four points of view had to be met. Usually orders for the company's machinery originated with the production manager or chief engineer; and ordinarily an order was placed only after a long period of negotiation.

The four salesmen were allowed drawing accounts and were credited with commissions on their sales. At the end of a month, if the amount of a salesman's commissions exceeded his drawing account, he was paid the difference. If, on the other hand, the commissions were less than the drawing account, a charge was made against the salesman, to be deducted from commissions on future sales. Under this plan, salesmen's monthly and yearly earnings varied widely. The chief advantage seen in the plan was that it encouraged salesmen to maximum sales efforts, inasmuch as their compensation depended on their sales volume.

Under the salary plan of payment proposed, the salesmen's remuneration would be regular. Moreover, under that plan the company would be free to quote delivery dates satisfactory to its manufacturing departments. Under the commission plan the salesmen were resentful if, after they had secured an order, the company was unable to give delivery quick enough to satisfy the customer.

The company decided to adopt the salary plan of payment. In 1927 this plan still was in effect and was deemed satisfactory by the company.

COMMENTARY: Despite the advantages that accrue from using the commission method of paying salesmen, the J. P. Shaftesbury Company unquestionably adopted the sounder plan when it decided to pay salaries to its salesmen. The statement of the case brings out clearly the reasons why this decision was sound: the irregularity of sales and consequently the irregularity in salesmen's income under the commission plan; the need for freedom for the factory in quoting delivery dates; the danger of overselling customers with subsequent expense on installations rejected after the 30-day trial; and the need for prolonged negotiations with executives and operating officials in companies which were prospective purchasers.[2]

September, 1927 M. T. C.

[2] See also Arnold Machinery Company, page 263.

Arnold Machinery Company[1]

MANUFACTURER—PACKAGING MACHINERY

Salesmen's Compensation—*Commissions Paid in Preference to Salaries.* It was suggested that the company, a manufacturer of automatic packaging machinery, should change its salesmen from a commission plan of payment to a salary plan. The company, however, decided to continue with the commission plan.

(1926)

The Arnold Machinery Company for 30 years prior to 1926 had manufactured automatic packaging machinery and had distributed this machinery through branches in New York City, Boston, Chicago, and San Francisco, with one or two salesmen and a field service man at each branch. From the first the company had paid its salesmen on a commission basis. This method of payment had been criticized and payment of salaries had been suggested.

The Arnold Machinery Company manufactured automatic machinery for use in weighing, packaging, and labeling all types of dry, free-flowing material, such as flour, cereals, and coffee. The high unit prices of the machinery, which ranged from $3,000 for a single machine to $18,000 for a set of machines which would perform all packaging operations, and the fact that each machine had a capacity of about 18,000 packages a day, practically limited the company's market to large manufacturers of nationally advertised products. Though the company's annual sales amounted to over $1,000,000, less than 500 firms were using Arnold machinery. These firms were prospects for further sales in many cases. Other prospective customers were few in number and were easily ascertainable.

The Arnold Machinery Company employed six salesmen, who sold the machinery directly to the users. One or two salesmen were located at each branch office. These salesmen covered large territories and traveled extensively, although they visited relatively few cities. The two salesmen at the Chicago office, for example, covered all the central United States as far west as the Rocky Mountains. Each salesman had a definite territory. All

[1] Fictitious name.

the salesmen had been with the company for over 10 years and all were thoroughly familiar with Arnold machinery. The salesmen had to be able to demonstrate to the superintendents or production managers in the organizations of prospective customers the savings that would result from the installation of the automatic packaging machinery. They were also called upon to give pre-installation service and advice as to plant layout. The salesmen were not required to give technical service after sales of machinery had been completed. This was the work of the field service men, who supervised installations and who were available to users in case of technical troubles or breakdowns. The salesmen, however, were expected to maintain cordial relations with all customers in their territories and to report any dissatisfaction or trouble. They were expected to maintain these cordial relationships even though the customers might not again be in the market for packaging machinery for several years.

The company paid its salesmen a 5% commission on sales, allowed them each a drawing account of $100 a week, and paid their railroad fares. It did not pay their hotel bills or other living expenses, however. All branch office expenses, such as those for rentals, stenographic services, and postage were paid by the company. The salesmen were given wide discretion in regard to frequency of calls on prospective customers, routings, and in some instances in regard to terms of sale. Four of the six salesmen were graduates of colleges.

The company advertised in trade journals and circularized a selected list of customers and prospective customers. Inquiries received were forwarded to the salesmen from whose territories they came. The salesmen followed up these inquiries at their own discretion. The company, however, required salesmen to report on a standard form the results of each personal interview and telephone call. The data reported included the date of the interview, the name, size, and products of the firm visited, the person interviewed, his position, the type of packaging machinery in use, and other general information regarding the customer and the results of the interview. These data were used by the Arnold Machinery Company in building its mailing list, in developing advertising policies, and in determining how commissions should be split when salesmen from two or more territories were instrumental in the final placing of an order. The company did not

keep a record of the proportionate time spent by salesmen in traveling and in developing relationships with potential customers.

Sales of the company had grown steadily and had not been affected seriously in times of business depression, inasmuch as use of packaging machinery for food products had been increasing and the market and volume of distribution of food products did not fluctuate widely. The growth of sales is indicated by Exhibit 1, where annual sales for 13 years are shown relative to 1913.

EXHIBIT 1

INDEX OF ANNUAL SALES OF ARNOLD MACHINERY COMPANY

(Sales in 1913 Taken as 100)

Year	Index of Sales	Year	Index of Sales
1913	100	1920	443
1914	121	1921	460
1915	135	1922	333
1916	115	1923	358
1917	141	1924	414
1918	290	1925	461
1919	355		

Although the total sales of the company had not fluctuated seriously, the sales of each salesman fluctuated widely from year to year. Selling packaging machinery usually was a slow process. Each sale commonly required several interviews. After developing cordial relationships with a prospective customer over a period possibly of a year or more, a salesman might receive an order for a series of machines; the commissions on this sale would make a substantial increase in his income for the current year, although a large part of the sales work might have been done in the previous year. Over the five-year period prior to 1925 the average annual income in commissions per salesman amounted to $7,000. The individual salesmen's incomes, however, fluctuated between $5,000 and $12,000 per year, and in one extreme instance a salesman who received $12,000 in commissions in 1920 received only $2,000 in 1921. When a salesman's earnings in commissions failed to equal his drawing account, the deficit accumulated as a debt of the salesman to the company to be deducted from future commissions. Once or twice salesmen had been in debt to the company

as long as two years. The company never had lost money through failure of salesmen to reimburse it for money drawn.

The salesmen had not expressed any dissatisfaction with the method of compensation, and the company was satisfied with the results obtained by the salesmen. The salesmen had been with the company so long that all were cooperative and looked upon their positions as ones which over a period of years would yield an increasingly high average compensation depending upon their own ability. The territories were so arranged that their sales possibilities were about equal. As the total sales of the company increased, so did the average income of the salesmen increase, since the company rarely added new salesmen. No salesman had been added to the sales force since 1920. The salesman added in that year previously had spent five years as a field service man for the company. Field service men received salaries of $50 a week plus a bonus for each installation they made which was accepted by the customer. The company planned to select any new salesmen it might need from among its field service men who had had over five years' experience with it.

The company, in 1926, decided to continue the commission method of payment.

COMMENTARY: The issue in this case is clear-cut; namely, whether the Arnold Machinery Company should plan to change from a straight commission method of paying salesmen to a salary method of payment.[2]

While a straight commission payment for installation goods of the character of the company's machinery is not common practice, the usual advantages of such a method held in this situation. As long as the plan was strictly followed, the company always knew what its selling expense percentage would be. The plan provided a direct stimulation at all times for the salesmen to increase their sales. Their earnings were in direct relation to their success.

The salesmen of the Arnold Machinery Company were given wide latitude in directing their own efforts. Sometimes objection is made to the straight commission plan on the ground that it results in loss of close control of the salesman's operations and may thus prevent the systematic development of a territory which would come from intelligent supervision by a sales manager. In this case, however, close control and supervision of salesmen to assure proper coverage of new prospects and a follow-up of active customers was not so important a

[2] See also J. P. Shaftesbury Company (B), page 335.

consideration as is sometimes true. The number of prospects for the packaging machinery were relatively few. With only moderate direction the salesmen of the company probably were inclined to seek out all prospects and to keep in touch with them with the thought of laying the groundwork for future sales. As far as active customers were concerned, frequent calls were not essential, inasmuch as the salesmen did not themselves look after repair service. The salesmen's own interest in additional sales to these customers provided them with the stimulus to make as frequent calls as probably were necessary to maintain proper relations.

The system up to 1926 had proved satisfactory to both the company and to its salesmen. There appear to have been present in the plan, however, several elements that at a later time might render it less successful than it had been.

The period from 1913 to 1926 had been one of growth for the company. Yet we note that successive years did not always show an increase; sales in 1922 were more than one-quarter less than in 1921, for example. Moreover, there had been wide fluctuations in the year-to-year earnings of individual salesmen. In any one territory such fluctuations were to be expected, since the purchases of such machinery by any customer were sporadic and infrequent. Hence the individual salesman could never be sure of obtaining a continuous and uniform volume of sales from his prospective customers. Such fluctuations always provide an element of danger when the commission plan of payment is used. In a period of prosperity a salesman tends to raise his living standards in keeping with his increased earnings. As experience shows, in times of depression readjustment frequently becomes necessary, bringing discontent just when the salesman's best efforts are needed. There were numerous examples of such maladjustment among businesses using the commission method in the period of deflation of 1920-1921 following the previous period of easy selling. The period through which this company had been passing up to 1926 was one of rapid increase in the use of packaged goods. In consequence of this increase, the demand for packaging machinery was present even in periods of depression. The time was likely to come, however, when the growth in use of packaged goods would be less rapid and the market for packaging machinery would be limited to replacements and a normal increase. If such a period came, the demand for packaging machinery probably would be subject to the same extreme fluctuations to which most installation goods are subject. At such a time the fluctuations in earnings of salesmen from year to year might well be more extreme than they had been up to 1926.

To overcome the uncertainty of continuous earnings from a straight commission method for a product with a sporadic demand, the com-

pany provided a liberal drawing account. The close relationships which apparently existed between the company and its salesmen, who were employees of long standing, had prevented any loss to the company from this liberal drawing account policy. Yet, it is doubtful whether a plan of permitting the salesmen to be in debt to the company for smaller or larger amounts, sometimes for a period of several years was entirely desirable. It might be argued that being in debt to the company would be a stimulus to salesmen to increase sales so as to be relieved of their obligations. It is doubtful, however, whether all salesmen would be at their best under such pressure. Again, it might be held that even though the company were to have a salesman withdraw from its service without repayment of amounts owed to the drawing account, such loss would amount merely to what otherwise would have been paid in salaries. Such an argument is not sound, however, for in many instances the company, under the commission plan, would have paid to the salesmen in periods of prosperity excess earnings, while it would have to shoulder the full burden of carrying the salesmen in a period of depression. Under a salary system, in a period of prosperity the company would be getting the benefit of easy sales and in turn would assume the burden of carrying the salesmen during a period of difficult selling.

The probability of more extreme fluctuation in the earnings of salesmen as the market for packaging machinery became more saturated leads me to believe that it would have been advisable for this company, in starting new salesmen, to experiment with the salary plan in place of straight commissions for the sales of its automatic machinery.

May, 1926 N. H. B.

Glenrock Manufacturing Company[1]

MANUFACTURER—HEATING EQUIPMENT

Sales Force Compensation—*Plan to Stimulate Sales.* Following the general business depression of 1921, the company, a manufacturer of boilers, heaters, radiators, and other heating equipment, wished to modify its methods of compensating its salesmen in order to stimulate sales; the salesmen were being paid salaries and reimbursed for expenses. A consultant employed by the company drew up a plan in which he recommended: payment of guaranteed minimum salaries; payment of monthly bonuses based on sales made in excess of quotas to be established; use of a plan for crediting sales to salesmen; and the extension of constructive assistance to salesmen through routing, market analysis, dealer helps, and use of customers' records.

(1922)

In 1921 the sales of the Glenrock Manufacturing Company, like the sales of most other industrial enterprises, fell off sharply. The company, which manufactured heating equipment, introduced various economies in operation and in October, 1921, announced a 12½% reduction in the wages and salaries of all employees and officers of the company. This reduction in salaries applied, of course, to the sales force. The company was in a sound financial position but deemed it necessary to husband its resources carefully during the period of depression and to make readjustments, such as the consolidation of several sales territories, that would facilitate the recovery of business activity.

When the reduction in wages and salaries was announced, the president of the company was confident that an improvement in general business conditions was imminent, especially in the building industry, but that sales could be made only at a substantially lower level of prices than that which had existed prior to the crisis in 1920. The task of securing orders in a strongly competitive market placed a heavy burden on the sales force.

The president of the company called in a consultant, in November, to advise him regarding changes in the methods of compensating salesmen and also regarding other sales problems, with a view to stimulating an increase in sales as expeditiously as possible. The first conference with the consultant was held at the com-

[1] Fictitious name.

pany's office in Chicago on November 22, 1921. The consultant was asked to make recommendations on methods of paying salesmen to go into effect on January 1, 1922; and his report was called for on December 9.

During the time at his disposal the consultant obtained the following facts regarding the company's affairs. The company manufactured boilers, heaters, radiators, and other heating equipment used in office buildings, schools, other public buildings, and private dwellings. The company operated several sales branches. In its Chicago district it employed 35 salesmen and in the Cleveland district 19 salesmen. The number of salesmen in the other districts varied in accordance with local conditions. The salesmen were paid straight salaries and were reimbursed for actual expenses incurred. The salesmen generally received salaries of $2,000 to $2,500 a year, but the company frequently lost salesmen to competitors at higher salaries, and the market rate for men of the type desired was judged to be $3,000 to $3,800.

The company sold about 60% of its product to jobbers, who resold largely to contractors for installations in large buildings. About 40% of the product was sold directly to retailers. The company advertised extensively to retailers, contractors, architects, and consumers in the districts in which sales branches were located. Sales to several large jobbers were made by the company at headquarters. A few salesmen specialized on missionary work with architects. The bulk of the work of the general sales force, however, was with the smaller jobbers, retailers, contractors, and building owners. The retailers who handled the company's products were largely plumbers and steam fitters. The company's sales showed great seasonal fluctuations, because of the seasonal character of the building industry.

In securing orders for large contracts, the cooperation of two or more salesmen occasionally was required, as, for example, when the owner was located in one city and the retailer or contractor in another. In compiling sales records for individual salesmen the company sought to divide the credit for such cooperative orders equitably between the salesmen concerned. When a retailer bought from a jobber, the sale was credited, on the salesmen's records, to the salesman in whose territory the retailer was located, provided the facts were reported to the company. The average-size order was about $100 to $150, with a maximum figure of $12,000.

The company had not made an analysis of its market for the purpose of setting up sales quotas. No system of customers' records was maintained in the sales department. Although the company had a record of the monthly sales per salesman, it had not computed the ratio of salary to sales for each salesman.

From the data available, the consultant computed the ratios of salesmen's salaries to sales in 1920 in the Chicago and Cleveland districts. The figures for the Cleveland district were higher than those for the Chicago district, but the latter were judged to be the more typical of conditions in other districts. In a few instances the differences in ratios could be accounted for by territorial differences, but most of the outstanding contrasts apparently could not be explained in that way. The executives were astonished, for example, to learn that one salesman, who had a

EXHIBIT 1

RATIO OF SALESMEN'S SALARIES TO SALES, CHICAGO AND CLEVELAND DISTRICTS, GLENROCK MANUFACTURING COMPANY, 1920.

CHICAGO DISTRICT				CLEVELAND DISTRICT	
Country Salesmen		City Salesmen		All Salesmen	
Salesman	Ratio	Salesman	Ratio	Salesman	Ratio
A	1.4%	AA	1.06%	A	0.7%
B	2.2	BB	2.5	B	1.6
C	4.0	CC	0.7	C	2.6
D	1.9	DD	1.8	D	3.2
E	4.5	EE	1.0	E	3.3
F	3.1	FF	1.0	F	4.8
G	2.6	GG	0.8	G	5.0
H	3.3	HH	0.9	H	5.8
I	3.5	II	1.06	I	5.1
J	3.4			J	3.8
K	1.8			K	3.0
L	3.1			L	3.2
M	1.6			M	2.1
N	3.1			N	5.1
O	2.7			O	4.1
P	6.3			P	3.1
Q	2.6			Q	2.8
R	3.8			R	3.4
S	2.9			S	3.2
T	2.2				
U	4.5				
V	2.8				
W	2.4				
X	2.3				
Y	2.3				
Z	3.1				

fertile territory and who was rated in their opinion as an especially good salesman, was receiving a salary that amounted to 6.3% of his sales.

For the Chicago and Cleveland districts the figures for individual salesmen were as shown in Exhibit 1.

As a result of these analyses and a consideration of general information regarding the company and business conditions, the consultant submitted the following report on December 9, 1921.

Recommendations as to Methods of Paying Salesmen in the Year 1922.

1. For the year 1922, each salesman should be guaranteed a monthly salary, provided he remains in the employ of the Glenrock Manufacturing Company, at least equal to the monthly salary received in December, 1921.

2. The following increases in salary should be made:

(*a*) In *city* districts, the guaranteed annual salary of a salesman should be made equal to 1% of his average annual sales 1919-21 in any case in which the guaranteed salary otherwise would fall below that amount.

(*b*) In *suburban* and *country* districts, the guaranteed annual salary of a salesman should be made equal to 1.5% of the average annual sales in any case where the guaranteed salary otherwise would fall below that amount.

3. In addition to guaranteed salary, in 1922 a bonus should be paid monthly to each salesman whose total sales exceed his monthly quota. The bonus should be 2% of the amount by which the sales exceed the quota for the month.

4. In the year 1922, the quota for each salesman for each month should be his average sales (in dollars) for the corresponding month in the three-year period 1919-21, with the following exceptions:

(*a*) In *city* districts, if the guaranteed annual salary of a salesman is in excess of 1.25% of his average annual sales, his annual quota should be 80 times his guaranteed salary. This annual quota should be divided into monthly quotas in accordance with the normal seasonal variations.

(*b*) In *suburban* districts, if the guaranteed annual salary of a salesman is in excess of 2.5% of his average annual sales, his annual quota should be fixed at an amount equal to 40 times his annual salary, the monthly quotas to be adjusted for seasonal variations.

(*c*) In *country* districts, if the guaranteed annual salary of a salesman is in excess of 3% of his average annual sales, the annual quota should be 33 1/3 times his guaranteed salary, with adjustments of monthly quotas for seasonal variations.

(*d*) If in any particular case an abnormally large or an abnor-

mally small monthly quota would result from the use of the method of three-year monthly averages, as, for example, in a case where an exceptionally large order had been shipped in one month, the quota should be adjusted by averaging three consecutive months for the three-year period, setting up one-third of the three-month average as the quota for each of the three months.

(*e*) Subject to the preceding provisions, where two or more territories have been consolidated under one salesman in 1920-21, the quota should be based on the record of the salesman, not on the combined records of the territories consolidated.

(*f*) In any instance where a salesman has been transferred from one territory to another, however, within the three-year period, his quota should be made up from the records of the territory in which he now works rather than from his personal record in another territory.

(*g*) When a new salesman is hired, a reasonable quota should be established for him, basing it on the past records of his territory and on the rate of salary that is guaranteed to him; his annual quota, in a suburban or country district, should be at least 40 times his salary and in a city district at least 80 times his salary.

5. Each salesman should be expected at least to reach his quota each year.

If any territory is not capable of yielding, in a normal year, a volume of sales at least equal to the quota established, the territory should be enlarged or some other means found to bring the sales force expense for the territory within economical limits.

If a salesman, who has been given ample opportunity and who has received proper instruction and assistance, cannot reach his quota regularly in a territory that is capable of yielding the assigned quota, he should be replaced.

6. Precautionary plans should be outlined to guard against overselling the factory in 1922; perhaps a reduction in the number of salesmen may be found advisable. The total amount of the quotas should not exceed the factory capacity.

7. Each sale should be credited to the record of the salesman who makes the sale to the initial purchaser. A mail order should be credited to the record of the salesman who regularly calls on the customer sending in the order.

When an identified sale is made to a jobber for shipment outside the territory of the salesman in which the jobber's place of business is located, the credit for the sale should be split between the salesman in the territory in which the jobber is located and the salesman in the territory in which the shipment is delivered. When an unidentified sale is made to a jobber, the sale should be credited to the salesman who regularly sells the jobber. When a sale is made to a contractor for shipment to an outside territory, the credit for the sale should be split between the salesman who sells to the contractor and the salesman in the territory in which delivery is made.

A salesman who influences a sale in which another salesman participates should be given the right to file a claim with the branch manager for a share in the credit for the sale.

The branch manager should be granted full discretionary power to make such adjustments as may seem to him to be fair in allocating credit for sales.

8. A careful study should be made of salesmen's routes and order of calls, in order to assist them in saving time and expense.

9. The card record of customers should be used systematically to prevent the loss of customers. As soon as an account appears to be becoming inactive, the salesman in the territory should be asked to explain the reason and a personal letter should be written to the customer. If this does not bring an order, the customer should be visited by the assistant branch manager or by a missionary salesman.

A similar procedure should be followed in the case of any customer from whom the company has reason to believe that it is not receiving as large a volume of orders as the customer's general standing warrants.

10. An analysis should be made immediately of the potential market in each territory. This should include a list of prospective customers (dealers) to be followed up in practically the same manner that retrogressing accounts are followed up, using missionary salesmen when necessary to secure adequate increase in distribution.

The analysis also should include such general indices as the number of dwellings, new building (in cities), crop conditions, and other indices to market conditions in the territory.

This analysis should include all the data that ordinarily would be used in fixing a quota; instead of using the results of the analysis as the basis of compensation at the present time, however, they should be utilized by the branch manager, or his assistant, in readjusting territories and especially in conferring with salesmen to show them their opportunities for earning a bonus.

11. The present plans for "dealer help" should be further developed, with especial emphasis on methods of merchandising and store management.

Explanation

The object of these recommendations is to provide a simple, constructive plan, easily understood by the salesmen, so definite that there will be no occasion for misunderstanding, and approximated to reasonable cost figures. It also is intended to be sufficiently flexible so that in future years it can be modified without embarrassment.

Some instances of glaring inequality in the rates of compensating salesmen now exist. These will be cured in large measure by the provisions for salary increases on the one hand and on the other by the recommended system of establishing and utilizing quotas for salesmen whose results have been particularly unsatisfactory.

The plan is by no means perfect. It does not provide specific rewards for economy in traveling expenses, for securing new accounts, for stimulating sales of individual products in preference to other prod-

ucts, or for promotional work with consumers and architects. It also does not provide specifically for systematic promotion of salesmen in accordance with merit. These points, and probably numerous others, all are worthy of careful consideration; but in each case they involve obstacles and complications which make it appear inadvisable to attempt to cover them in the plan that is to go into effect January 1, 1922.

Guaranteeing Monthly Salaries

By guaranteeing monthly salaries the company will assume an increased liability, but it is justified by the prospective business conditions, and this liability will probably be more than offset by the gains accruing from the adoption of the other provisions of this plan. This guaranty will serve as evidence of good faith and facilitates such readjustments as may be necessary in the future.

Increases in Salaries

The recommendations for increases in salaries involve several thousand dollars' additional expense. This additional expense should be more than offset by the saving on increased sales, without extra expense, that eventually will result from raising the quotas of the least efficient salesmen. In the Chicago branch, using the 1920 figures, for example, the additional expense from increased salaries would be $3,574. The quotas for the least efficient salesmen, on the other hand, would call for an increase in sales amounting to $372,000, without additional compensation to the salesmen for whom these higher quotas were fixed. The increases in salaries will take care of some cases of especially capable salesmen who deserve larger incomes.

As an alternative to increasing salaries in the specified cases, the quota for each of these salesmen might be fixed low enough so that he would receive the same increase in income in the form of a bonus. Such a plan, however, would probably be less appreciated by the salesmen, more difficult to administer, less of a stimulus to further increases in sales, and more costly to the company.

The figure of 1% for city salesmen was determined from an examination of the Chicago figures for 1920. In that year three of the Chicago city salesmen received salaries less than 1% of their sales, whereas two were 1% and four were over 1%, the highest being 2.5%. In Cleveland in 1920 the salary of the city salesman was 0.7% of his sales. Possibly the figure of 1% may be too high a guaranty in some individual cases, but it appears fair in its application to the Chicago and Cleveland forces.

The figure of 1.5% for suburban and country salesmen was determined from the 1920 figures for the Chicago and Cleveland branches. On the basis of those figures, it would involve increases in salary for three salesmen in the Chicago district and for one in the Cleveland district.

These increases will help to eliminate some of the grossest inequalities that now exist.

The Bonus

Although the ton is a better statistical unit than the dollar for most purposes, nevertheless it is recommended that the bonus be based on sales in dollars for the following reasons:—this plan is far more easily understood by the salesmen; it is more easily applied; if prices go up temporarily, the income of the salesmen will be automatically increased; if the long-run tendency of prices is downward, the percentage rate will render readjustments simple, whereas it might be necessary to cut any rate that now could be fixed on a tonnage basis.

The 2% rate affords an opportunity for a salesman to obtain a substantial increase in earnings by diligence and good salesmanship. In all cases for which data have been available, except city salesmen, the total sales force expense, including salaries, commissions, and traveling expenses, is substantially more than 2% of sales; hence there will be a saving to the company as well as a benefit to the salesman by fixing the rate at 2%. To put the rate higher would establish a precedent that later might prove embarrassing; the rate of bonus should never be cut. To place the rate higher would necessitate setting a higher and consequently a more difficult quota for numerous salesmen. Inasmuch as the bonus is paid on a monthly basis, the risk of abnormally large bonuses being paid in exceptional months would be greater if the rate were higher.

Although the 2% rate may not provide for as rapid an increase in earnings as some of the salesmen desire, nevertheless it will be far easier to provide for additional increases than for reductions; the conservative policy is the better under present conditions. If this plan is fairly successful, the rate can be increased when experience justifies it, or the plan readily can be amplified in future years by paying supplementary bonuses for particular purposes. The 2% rate will help to maintain the flexibility of the plan.

No provision is made for penalizing directly a salesman who fails to make his quota in any one month. It would be possible to stipulate that a bonus should be paid only when the quota in previous months has been met, or to pay the bonus on the amount by which the monthly sales exceed the sum of the quota for the current month plus any accumulated deficiency of quotas in preceding months. Such a provision is not recommended, for the following reasons:—a salesman cannot control the time of shipment from the factory, although his sales are credited only when shipped; from the salesman's standpoint, it would largely nullify the effect of the guaranteed salary; if a salesman frequently is deficient or attempts to take unfair advantage of the company on this point, he obviously is not a desirable employee and should be discharged; the success of the whole plan depends upon a broad-minded spirit of fair play on both sides and such a regulation would be hardly consistent with that spirit.

Determining the Quota

The January quota for each salesman, unless he is subject to ex-

ceptional treatment, will be the average of his monthly sales in January, 1919, January, 1920, and January, 1921. His February quota will be the average amount of his February sales in 1919-21.

The three-year average is used, in preference to a single year, in order to guard against abnormal irregularities that occasionally may have occurred in the fluctuations of the monthly sales of individual salesmen. This method of using monthly averages will be readily comprehended by the salesmen and the figures are easily determined. Not the least of its merits is that it yields quotas based on the records of actual performance rather than figures that might seem arbitrary and artificial to the salesmen.

The exceptions to the use of the three-year monthly average in establishing quotas are made in order to eliminate gross inequalities in the rates of compensation and to bring the selling expense in each territory within reasonably economical limits. The city salesman in the Chicago district, for example, who received next to the highest salary in 1920 had next to the smallest sales of any of the city salesmen. To justify his salary of $3,500, his sales should have been at least $280,000 instead of $138,000. The country salesman in the Chicago district who received the highest salary in 1920 had next to the smallest sales. To justify his salary of $2,700, his sales should have been at least $90,000 instead of $43,789; in fact, it might not be unfair to place him on a 2% salary basis, in which case the volume of sales expected from him would be fixed at $135,000 a year.

By making the adjustments in quotas provided for in the subdivisions of Section 4 of the recommendations, many of the most serious objections to basing quotas on past records are removed. The overpaid salesmen are hereby assigned quotas large enough to put them on a fair basis in comparison with the other salesmen and the overpaid salesmen will be expected to reach these quotas if they are to hold their jobs. Thus the salary expenses for the various territories will tend to be brought into line.

In future years the standards may be raised, if experience warrants, so that all salesmen will be put on a basis whereby their guaranteed salaries will not exceed, say, 2.5% of the quotas assigned them. The decision on this point, however, will depend upon future developments and upon consideration of individual cases.

The conversion factors 80, 40 and 33 1/3 are the amounts by which the salaries in respective cases are to be multiplied to show the minimum amounts of sales that should be obtained in return for the salaries paid. The analysis of the Chicago and Cleveland figures indicates that the salesman in a city district should not receive a salary greater than 1.25% of his sales. Hence, if his salary is $2,500, his annual sales should be at least $200,000. In a country district, if the salary of the salesman is $2,100, the annual sales should be at least $70,000. This method of fixing quotas is to be preferred to reducing salaries. If any salesman whose salary has been an abnormally high percentage of his sales cannot reach the quota set for him, he should be replaced.

Should 1922 Quotas Be Scaled Down by an Amount Equivalent to the Average Reduction in Prices of the Glenrock Manufacturing Company's Products?

Prices of these products were higher in 1919 and in 1920 than they are today. Consequently, the three-year averages in dollars represent a greater tonnage at the present price level than in 1919 and 1920. In other words, when a salesman is asked to sell as much in dollars and cents in 1922 as in 1919-21, he is being requested to sell more in tons, before receiving a bonus. Fairness to the men would require a scaling down in quotas proportionate to the decline in prices, if it were not for several other considerations. Such a scaling down would remove the ground for possible charges of exploitation, and would establish quotas more readily reached. On the other hand, a salesman is guaranteed the rate of salary that he is now receiving; hence, if he falls short of his quota, he is not necessarily penalized. The salesmen have been relieved of a good deal of missionary and promotional work. For a substantial number of salesmen, even under this plan, the quota is liberally low, judging from the ratios of their salaries to their sales. Numerous salesmen have been or will be given additional, consolidated territories, and thus opportunities for larger sales, whereas their quotas will be based on their individual records, not on the combined records of the consolidated territories. Constructive help in increasing sales is to be given by the company. There is a danger of putting the quotas too low in view of uncertainty as to price tendencies. Business prospects for 1922 should make selling easier than it was for substantial periods in 1919-21. The scaling down can be carried out from time to time in the future, whenever there is assurance that a permanent drop in prices has occurred. For these reasons it is recommended that the three-year averages should not be scaled down in fixing the quotas for 1922.

Crediting Sales to Salesmen's Records

The recommended method of crediting sales is similar in practically all respects to the method whereby sales were credited to salesmen in 1921.

Because of joint effort and territory conflicts, this problem obviously is one of the most difficult to be solved in working out any plan for compensating salesmen. The problem exists, however, whether the quota is set in tons or in dollars and whether the bonus is paid on products or on sales. If salaries or other forms of compensating salesmen are to be adjusted to accord with accomplishment, this question of how to credit results must be faced.

In crediting sales made to a jobber or to a contractor that are shipped outside the territory in which the jobber's or contractor's place of business is located, full discretion must be granted, for the present at least, to the branch manager to make such adjustments as seem fair. Although the problem is full of perplexing administrative details, the difficulties should not be insuperable.

Constructive Assistance to Salesmen

Sections 8-11 of the recommendations—routing, use of customers' records, market analysis, and dealer help—are at least as important as the proposed scheme of compensation. Unless such constructive plans as these are put into effect immediately, the bonus plan itself should *not* be adopted. The bonus should not be looked upon merely as a speeding-up device; numerous salesmen will not respond to such an incentive unless concrete assistance is given to aid them in producing larger sales.

The recommendations regarding the study of routing are not intended to develop prescription of hard and fast rules but rather to aid salesmen in finding out how they can economize their time.

The constructive use of customers' records is vitally necessary. It is just as important to prevent the loss of an old customer as to secure a new one. Occasional instances of friction and misunderstanding with customers are certain to occur and they will breed ill will unless cared for promptly.

The market analysis recommended is to be used to show a salesman where he should be making larger sales. As a guide and stimulant it probably will be more readily appreciated by the salesmen than if it were utilized as a direct means of establishing quotas to be used in governing compensation. The provisions for fixing the quotas on records of past performance with the supplementary market analysis as a guide to expansion very likely will provide a plan that is thoroughly acceptable to the salesmen, because of its freedom from seemingly artificial compulsion.

Broad-gauge "dealer help," finally, should assist materially in increasing goodwill, thereby smoothing the way for the salesmen and rendering it easier for them to secure increases in sales that will yield them the additional income which they desire.

Commentary: When the consultant was called by the president of the Glenrock Manufacturing Company in November, 1921, there were, according to the facts given in this case, several clear defects in the company's management of its sales force which needed remedying if the company were satisfactorily to meet the difficult sales situation which existed. The significance of the case rests in the method of diagnosis of the trouble used by the consultant and the remedies suggested by him to meet the difficulties. He recognized numerous defects in the management of the sales force, but his analysis showed that the following were the most important problems to be met at the time.

1. The company had failed adequately to measure the effectiveness of performance of its salesmen. In so doing it had not established a fair basis for giving promotion or reward in accordance with performance. But beyond this, failure to check performance had led to ignorance of the unit sales costs by territories, with the result that these were not maintained at a consistently low figure.

2. By using straight-salary compensation without a good method of checking effectiveness and of rewarding men in accordance with performance, the company had failed to provide a ready stimulus to salesmen to exert themselves.

3. There was ineffective supervision of the sales force. In routing its men, in keeping a record of customers' orders, and in showing the salesmen wherein they could secure sales results, the company was failing to develop its full sales possibilities.

4. The company was paying less than the going rate for the type of men which it desired on its sales force. This in itself induced turnover in the sales force and probably was conducive to lack of content among the salesmen. Accordingly, any plan recommended by the consultant should have looked forward to remedying this defect. Of course, in remedying it, the attempt should have been to increase the salaries of salesmen without increasing the unit cost of sale.

Let us turn to these particular problems and note the way in which they were to be met.

1. *Measuring the effectiveness of performance of salesmen.* The consultant showed wisdom in applying the ratio of salary to sales as an index of the effectiveness of salesmen. Although it is not an infallible measure, inasmuch as territories differ and the duties which salesmen are called upon to perform vary, yet in this case it provided a readily obtainable and valuable index of effectiveness and served to throw light upon dark spots.

The ratio of salaries to sales by individual salesmen showed that there were certain norms of performance which might well have been expected of salesmen according to whether their territories were urban, suburban, or rural. The wide variations that came to light immediately suggested investigation to determine the reasons, in some instances, for high sales cost, which should be brought in line, or in other instances, for unusual sales effectiveness, which deserved reward. A check upon effectiveness of performance then was necessarily the first step in diagnosing difficulties and in arriving at a compensation plan.

2 and 3. *Method of compensation and supervision of sales efforts.* As stated above, the salary method employed, without check on effectiveness and without reward of salesmen in accordance with performance, apparently was failing to provide a ready stimulus to salesmen to exert themselves. Compensation to a sales force should be made in a way to call forth exertion of effort when and where desired.

By retaining a guaranteed, basic salary, the recommended plan gave the sense of security which many salesmen desire. In addition, as stated in the consultant's brief, such a guaranty was desirable "to serve as evidence of good faith and to facilitate such readjustments as might be necessary in the future." Whenever a readjustment of salary plans is

undertaken, it is essential that the confidence of a sales force be retained.

The bonus on sales in excess of quotas, which was recommended, had the possibility of calling forth the latent energies of the salesmen and of providing a stimulus lacking in the old plan. Of course, whether a quota system is to be effective in stimulating salesmen depends upon the reward which is offered and the fairness with which the quota is set. The quota must not only be fair but it must be felt by the men to be fair and just.

This particular situation was complicated by the fact that the failure of the company to measure performance had led to a situation wherein salaries apparently were not being paid in accordance with merit. Accordingly, setting up a sales plan which would produce sales at a low consistent figure, a desideratum of any compensation plan, meant that some salesmen would have to produce more than they had previously, or ultimately be replaced. In other words, there was need of a certain amount of policing. In the performance of the necessary policing job, however, the plan recommended a spirit of cooperation and fair play by the management which should have gone far in retaining the loyalty of the sales force.

For men of normal producing ability the quotas, based on the average of the preceding three years adjusted on a monthly basis, should not have appeared unfair in the light of the forecast of better business conditions and the recommended aid to salesmen. In setting quotas for men of poor record, a consistent low sales cost was insisted upon by requiring sales 80 times guaranteed salary for city salesmen, 40 times guaranteed salary for suburban salesmen, and 33 1/3 times guaranteed salary for country salesmen. At first sight this might appear to have been arbitrary. In this connection, however, it must be noted that the consultant recognized the injustice of making quotas merely mathematical deductions. Quotas that are arrived at purely on a mathematical basis and take no notice of differences in territories, differences in men, and differences in competitive and business conditions are not desirable and are likely to discourage the salesmen. The consultant, recognizing this truth, wisely insisted upon an analysis of sales territories to determine sales possibilities and upon subsequent direction and assistance that would enable each salesman to attain a quota which was evidently fair as shown by analysis. He recommended further that whenever the quota was apparently unattainable from the territory allotted, then there should be realignment of territories in order to make the quota fair. In other words, the plan called for cooperation on the part of the management and for flexibility in the final determination of quotas, characteristics which were essential elements in initiating the quota plan.

4. *Raising the level of salesmen's income.* Although in this situation it was necessary to call for greater selling efficiency from some sales-

men, at the same time it was desirable to raise the general level of salaries of the sales force, if possible, without raising unit sales cost. The suggested plan did not meet this issue at once, yet it had the merit of leading towards its solution. For those salesmen who were efficient there was an immediate increase in salary and likelihood of a bonus in the form of a commission for all sales beyond the quota. Yet it is to be noted that the commission allotted beyond the quota was such that, while stimulating the salesmen to greater efforts, it still provided a low unit sales cost to the company. For those salesmen who were not producing business at a low unit sales cost, no immediate salary increase was in view; instead, the quota appeared as an attainment necessary in order to justify their retention on the sales force.

It is to be noted that the quota was broken down on a monthly basis with opportunity of securing a bonus monthly. This made the possible reward of bonus close enough to induce constant effort. Although the plan made possible the payment of some bonus to a salesman during a year in which the salesman did not attain his annual quota, since the quota was to be administered on a strictly monthly basis, yet the consultant's argument against permitting an accumulated deficit of quota was well taken. To have permitted this would have tended to reduce the salesman's confidence in the scheme and would have taken away from the stimulus attached to a monthly quota. A scheme involving rewards for attainment is more effective if the rewards are not placed so far in the future that they lose their charm.

A desirable feature of the plan, which should be sought in any plan of compensation, was a simplicity which insured that it would be readily understood by the salesmen.

The statement of the plan recognized some of its defects: it did not provide specific rewards for economy in traveling expenses, for securing new accounts, and for putting forth effort in other desired directions; nor did it provide specifically for systematic promotion in accordance with merit. On the other hand, the plan did take into consideration the more important problems which the company faced at the time in the management of its sales force, and provided a plan which, if wisely administered, should have gone far in meeting the difficulties faced. Moreover, the plan was flexible enough to permit modification.

April, 1928 N. H. B.

Boden Paper Company[1]

WHOLESALER—PAPER

Sales Force Control—*Adoption of System for Crediting Orders to Salesmen.* Each salesman of the Boden Paper Company, a New England wholesaler of paper and paper products, was free to solicit orders anywhere in New England. This lack of definite sales territories resulted in so many disputes among the salesmen that the company decided to install a card index system for determining the priority of salesmen's claims to customers' accounts, thus facilitating the crediting of orders to the salesmen. The system adopted proved successful in decreasing the number of disputes.

(1927)

The Boden Paper Company, a wholesale firm located in a large New England city, had a sales volume of about $1,500,000 in 1926. Its main line was heavy sulphate, or Kraft, paper. Other lines which the company sold were bogus paper, tissue paper, fiber and screening paper, paper towels, paper cups, pie plates and oyster pails, gummed tape, toilet paper, and a wide variety of twines. The company sold over 1,500 items, if the many variations in sizes, weights, and colors were taken into account. The company purchased from about 300 sources, usually directly from the manufacturers but sometimes through their selling agents.

Salesmen of the Boden Paper Company had traveled in all parts of New England for many years, but the company had been cultivating its territory intensively for only a comparatively short time. In 1927 the company had about 4,000 customers who had purchased within a year's time and about an equal number of customers who had purchased within five years. The company's salesmen never had been assigned definite territories; each salesman was free to solicit orders anywhere in New England. As the number of salesmen was increased and as the market was covered more intensively, disputes among salesmen over customers and orders received were frequent. This situation became so acute in 1927 that the management proposed to revise its method of crediting orders to salesmen.

The company employed 27 salesmen. They sold over 50% of

[1] Fictitious name.

the company's output to manufacturers, including firms of almost every type, and the remainder to wholesalers, retailers, hotels, and offices. Sometimes the paper was used in production processes, such as in the making of waterproof paper, paper boxes, wireless condensers, paper cores for bobbins, and heels for cheap shoes. Kraft paper was used chiefly for wrapping.

In the metropolitan district of the city in which its warehouse was located, the company competed for relatively small orders. The average size of order was for about $10 and approximately 75% of the orders were for less than $20. Outside of the metropolitan area, however, the company could not advantageously compete for small orders with local wholesalers having stocks in the users' territories. The local wholesalers could deliver more quickly and more cheaply. The company was glad to receive small orders from any source, however, because its prices were adjusted to cover the proportionately larger cost of handling them. The Boden Paper Company could compete for large orders almost anywhere in New England. The larger customers generally purchased in half-ton lots or more, or in quantities amounting on the average to about $50, with a range from a few dollars up to amounts in the thousands. Since these customers usually anticipated their needs, quick delivery was not essential and their requirements could be shipped by freight. Large orders generally were shipped directly to the users from the mills supplying the company, most of which were located in New England. Freight charges to most places in New England did not put the company at an appreciable competitive disadvantage as far as large orders were concerned. A typical price schedule of the Boden Paper Company was as follows:

Sulphate Paper, No. 1 Grade	Delivered Price (*cents*)
Less than 50 pounds	12
50 to 100 pounds	10½
100 to 250 pounds	9½
250 to 500 pounds	8¾
500 to 1,000 pounds	8½
1,000 to 2,000 pounds	8¼

Salesmen were allowed wide discretion in quoting prices. The price schedule, however, usually represented the minimum below which they could not go. Because of the keenly competitive con-

ditions, prices quoted to customers seldom exceeded the minimum schedule. The salesmen were paid straight salaries; but each salesman's salary was adjusted annually on the basis of the net profits on his sales of the previous year. This method not only stimulated sales but encouraged economy.

The officer in charge of sales was secretary of the company. He also did the buying. No aid was given the salesmen in finding new customers except in the case of the few lines for which the company had exclusive agencies. The salesmen generally looked upon the firms to which they sold as customers of their own rather than as customers of the company. When the company began cultivating its territory intensively, disputes over orders arose among the salesmen with increasing frequency. Usually the orders over which disputes arose were among those received by telephone or by mail. Between 25% and 30% of the orders were received in these ways. Each dispute was settled independently, but it was difficult to decide to whom the order should be credited when two salesmen had called on the same customer. No record was kept of the dates of calls; so the sales manager usually was unable to settle disputes with satisfaction to both parties. Friction between salesmen had become so serious by 1927 that it was weakening the morale of the sales force. The sales manager therefore estab-

1. FIRM	9. RATING
2. ADDRESS	
3. SALESMAN	ENTERED BY 10. SALESMAN (DATE)
4. BUYER	ORIGINAL 11. SALE (DATE)
5. BUSINESS	REPORT FROM 12. MADE OUT (DATE)
6. REMARKS	
PRESENT 7. RECORD	13. O.K. TO FILE
RETURN TO SALESMAN 8. LAPSED—GET RECORD	SALESMAN 14. NOTIFIED

Exhibit 1: Prospect card used by sales department of Boden Paper Company.

lished a prospect department for the purpose of keeping a record by which priority of salesmen's claims could be determined.

The prospect department maintained card index files. A prospect card such as was used is shown as Exhibit 1.

When a salesman located a prospective customer, he filled in spaces 1 through 6 on the prospect card and also space 10. Usually the prospect was obtained by a preliminary call. The salesman was not allowed to quote prices when making a preliminary call since some other representative of the company might have been there and quoted a different price; instances of this sort had occasionally caused trouble under the old method. A firm visited by a salesman was not accepted as a potential customer unless its credit rating was satisfactory as shown in *Dun's Reference Book,* in *Bradstreet's Ratings,* or in some other acceptable way, or until the prospect card had been approved by one of the officers of the company whose special task was to pass on new customers.

The prospect department issued a weekly report of new prospects. If no other salesman claimed a prospect listed in the report, the salesman filing the card could treat that prospect as his. If another salesman claimed the prospect, however, and if his claim was good, "Return to Salesman" in space 8 of the prospect card was checked and the salesman filing the card was notified. If, however, the prospect in question was one which the second salesman had permitted to become "lapsed," the claim of that salesman, unless he was able to explain the lapse satisfactorily, was not valid and the prospect belonged to the salesman filing the card. A prospective customer became lapsed when the salesman claiming that prospect had failed to secure an order from him within a year after filing the prospect card. An actual customer became lapsed after a similar period of six months.

When a salesman made his first sale to a prospect, the prospect department obtained the date from the customer's ledger and recorded it in space 11 on the prospect card. The card then was transferred from the prospect file to the customer file. The customer file was kept according to salesmen and also according to cities and towns.

After the new plan had been put into effect, the number of disputes over orders was greatly decreased. The few disputes which did occur the sales manager attributed to the fact that the prospect system had been in use for less than a year. There were

some salesmen, however, who strongly opposed the system. About half of the sales force had been in the employment of the company for over 10 years. The dissatisfaction was chiefly among these men, who had a strong feeling of independence and who did not like to be bothered with what they held to be red tape.

COMMENTARY: The plan which the Boden Paper Company adopted for listing prospects was yielding good results in practice and, despite some opposition from several of the company's salesmen, should have continued to serve as a practical means of minimizing disputes regarding rights to solicit orders from prospective customers. The plan, nevertheless, served merely to patch up decrepit methods of sales management, which sooner or later would involve the company in difficulties of a serious character. The lack of systematic control over the activities of the salesmen must eventually enervate the company's sales organization.[2] The prevalence of such methods in various industries helps to explain some of the waste and ineffectiveness in marketing, particularly by jobbers in certain trades.

The looseness of the company's control over the activities of its sales force is indicated by the following facts. Each salesman was permitted, within broad limits, to lay out his own routes, to determine his frequency of calling on each customer, to select his own list of prospects, and to look upon each of his customers as a personal customer rather than as a customer of the company. The salesmen, furthermore, were forbidden to quote prices on the first interviews with prospective customers, because of the possibility that other salesmen from the same company might have visited those prospects before and have quoted different prices.

The company's methods of handling its sales force were analogous to the practice which formerly obtained in various factories of turning jobs over to factory foremen to be handled according to the judgment of each foreman. In well-managed factories that practice has been superseded generally by the operation of systems of planning and scheduling operations. In sales management, careful sales planning and control of salesmen likewise are superseding reliance on the judgment of the salesmen in guiding their own activities. The importance of the personal acquaintanceships of the salesmen has been proved in numerous instances to have been exaggerated. In this case, if the company had been exercising a systematic control over the activities of its salesmen, with definitions of territories or fields for work, the disputes would not have arisen over the rights to solicit particular prospects.

December, 1927 M. T. C.

[2] See also Erven Leather Products Company, page 3; Paley Truck Company, page 252; Antrim Paper Company, page 288; and Munro-Cliff Company, page 245.

Antrim Paper Company[1]

MANUFACTURER AND WHOLESALER—PAPER

Sales Force Control—*Establishment of Exclusive Territories for Salesmen.* The sales manager of the company, a manufacturer and wholesaler of paper and paper products, proposed to establish exclusive sales territories for the company's salesmen. Under the existing arrangements each salesman was free to travel in any part of the company's sales territory. This resulted in heavy traveling expenses and in disputes among the salesmen. The proposal was rejected, however, on the grounds that it would be unfair and unwise to disturb the relationships which the salesmen had established with customers.

(1927)

In 1927 the sales manager of the Antrim Paper Company proposed to establish definite territories for the company's salesmen.

The Antrim Paper Company sold approximately 50 lines of paper and paper products, some of which it manufactured itself and some of which it purchased for resale. Among the products were wrapping paper, paper boxes, gummed tape, paper cups and plates, paper towels, and toilet paper. The company's active sales area was limited to New England. Its principal customers were manufacturing plants and retail stores. It also sold to hospitals, schools, offices, and other organizations.

The company had 30 salesmen traveling in New England in 1927. A large proportion of these salesmen had been working for the company for 10 or more years. They were given drawing accounts and were credited with commissions based upon the gross margin on their sales.

None of the salesmen had definite territories. Each, over a period of years, had built up a group of customers which he regarded as his own. Each salesman was free to travel in any part of New England but was not to call upon any customer or prospective customer who previously had been visited by another salesman of the company. The result of this situation was heavy traveling expenses and much ill feeling among the salesmen.

The chief task of the sales manager was to settle disputes which arose among the salesmen as to whose customers such and such firms really were. The sales manager for several years had been

[1] Fictitious name.

encouraging each salesman to concentrate his efforts upon customers located in one or two definite areas rather than to visit firms in all parts of New England. These efforts on the part of the sales manager were meeting with some success. In several instances salesmen's earnings had improved after the sales manager had persuaded the salesmen to relinquish to other of the company's salesmen certain customers located at a distance from the majority of their customers. Nor had sales to the customers transferred from one salesman to another decreased following the change.

The sales manager's proposal to establish definite territories for the salesmen, on the basis of number of customers, potential sales, and distances to be traveled, met with decided opposition, however, from the salesmen as well as from various of the company's officials. The chief objections to the plan were that the salesmen had developed certain accounts and consequently should be permitted to retain them; and that many customers probably would discontinue buying from the company if different salesmen were sent to call upon them. The opposition to the plan was so strong that the sales manager was unable to make the proposed change.

COMMENTARY: This case furnishes an example of the tenacity with which antiquated and uneconomical methods of selling persist. The theories of those executives of the Antrim Paper Company who blocked the adoption of an orderly plan for sales management were held a generation ago by numerous companies which since have learned that a firm can stabilize its business and increase its profits by carefully planning the work of its salesmen.[2]

December, 1927 M. T. C.

[2] See Erven Leather Products Company, page 3;. Paley Truck Company, page 252; Munro-Cliff Company, page 245; and Boden Paper Company, page 283.

Tansey Supplies Company[1]

MANUFACTURER—TYPEWRITER SUPPLIES

Sales Promotion—*Use of Missionary Salesmen.* The company, a manufacturer of typewriter supplies, which it distributed through its own branches, through large stationers to whom it granted exclusive territories, and through direct sales to retail stationers, maintained salesmen who sold to retailers and who also did missionary work for retailers. Because it wished to increase its sales volume, the company planned to expand its missionary sales force, believing that a further increase in sales volume must depend on increases in the sales of the distributors already handling its products.

(1927)

In 1927 the Tansey Supplies Company decided that it was approaching a saturation point so far as number of distributors was concerned, and that for further increases in sales volume it must depend chiefly upon increases in the sales of the distributors already handling its products. For several years prior to 1927 the company had been cooperating actively with its retail customers in increasing their sales of its goods. In 1927 the company had 42 salesmen, 36 of whom, it was estimated, spent 60% of their time soliciting orders for the accounts of the company's retail distributors. The company proposed to expand its missionary work, and expected to have a sales force of 70 men within five years. A corresponding increase in sales volume was anticipated.

The Tansey Supplies Company was a large manufacturer of carbon paper, typewriter ribbons, typewriter oil, and type cleaners. Its products were of high quality, and its prices in general were about 20% above the average of its competitors.

In six cities in the United States, Chicago, San Francisco, New York City, Philadelphia, Boston, and Pittsburgh, the company maintained branch offices at which it carried stocks and from which its salesmen operated. These branch offices sold directly at list prices to users in the metropolitan areas in which they were located. About 30% of the company's total sales were made in this way. Individual orders received from users ranged in amount from $1 to $1,000, and the potential market included every user of a typewriter.

[1] Fictitious name.

In Spokane, Seattle, Los Angeles, Kansas City, New Orleans, St. Louis, and Atlanta, the company sold to large stationers to whom it granted exclusive territories. These distributors sold at retail and also to smaller retailers. The company gave them a 10% discount from its prices to other retailers in order to make it possible for them to handle the business of the smaller retailers at a profit. These distributors accounted for approximately 10% of the company's total sales. They all maintained salesmen of their own who were thoroughly familiar with the uses and application of the products of the Tansey Supplies Company.

The company made about 30% of its sales directly to retail stationers without exclusive territories. There were approximately 6,500 of these retailers selling Tansey products in 1927. The company allowed them a 50% discount from list prices to users. Average unit orders from retailers amounted to from $25 to $300.

The remaining 30% of the company's sales were distributed: 10% to foreign countries; 10% to firms which sold the goods under their own names; and 10% to manufacturers of typewriters and to typewriter distributors.

Prior to 1904, the Tansey Supplies Company had made all its sales directly to users. The company had regularly circularized all typewriter owners, offering to send them typewriter ribbons on approval for 30 days. In 1904, because the cost of this method of distribution had become excessive, the Tansey Supplies Company had decided to encourage sales through retailers except in the large cities where it maintained branch offices. The company employed salesmen to sell to retailers and also to solicit orders for the retailers' accounts. By 1912 the company had 12 salesmen selling to retailers and 6 salesmen doing missionary work for retailers. Whenever a missionary salesman secured an order for a retailer, the retailer was expected to place an order with the company for twice the amount of the missionary order.

In 1912 the company had decided to discontinue the use of men for missionary work alone and instead to have the same men solicit orders from retailers and from users for retailers' accounts. It had been found that the men who devoted all their time to missionary work did not secure sufficient orders to make their employment profitable to the company. By having the same men solicit orders from retailers and from users, moreover, the com-

pany could decrease the size of salesmen's territories and provide for more intensive sales work.

The Tansey Supplies Company, in 1912, had begun to develop a stock control system for its retailers. Retailers using this system were expected to order each month sufficient of the company's products to bring their stock up to a standard based on past sales. By 1927 an improved form of this stock control system as sponsored by a national trade association was in use by most of the large and well-managed stationers' stores in the United States. The general sales manager of the Tansey Supplies Company stated that use of this system encouraged the company's salesmen to try to increase the retailers' sales inasmuch as the size of the orders which the retailers placed depended on their past sales.

The company constantly had added to its sales force, until in 1927 it had 42 salesmen in addition to its 6 branch managers, who also were active in selling. These salesmen were paid small salaries and a 10% commission on all sales in their territories. Total expenses of the salesmen, including salaries, commissions, and traveling expenses, averaged approximately 18% of sales in their territories. The salesmen traveled from the central office and also from the company's branch offices. With the assistance of the branch managers, the salesmen sold directly to users in the cities in which the branches were located. Orders were solicited from small users as well as from large users, and individual orders varied widely in size.

Beginning in 1925, the company had undertaken to increase its sales to large users by instructing them in special applications of its products and by otherwise assisting them with problems in which the use of carbon paper and typewriter ribbons was involved. In 1927, 6 of the 42 salesmen were devoting most of their time to this work with large users. The company estimated that about 10% of its sales were made directly to large users as a result of this special sales service. Most of the large users were located in the cities where the company made all sales direct, but the company also sold directly in other territories to large users requiring technical sales service.

Thirty-six of the company's 42 salesmen spent the larger part of their time outside the cities in which the company sold directly, soliciting orders for retailers and assisting retailers' salesmen to secure orders. These salesmen, the general sales manager esti-

mated, spent approximately 60% of their time soliciting missionary orders. They called upon small as well as upon large users. The remainder of their time, except that spent in direct selling in the branch cities, the salesmen spent in taking orders from retailers, instructing retailers' salesmen in sales methods, addressing meetings of retailers' salesmen, encouraging retailers to install the standard stock control system, distributing dealer helps provided by the Tansey Supplies Company, and in otherwise assisting retailers. The manufacturer's salesmen often accompanied retailers' salesmen on sales visits. The general sales manager estimated that approximately 33 1/3% of the orders which the company received from retailers resulted from the direct and indirect work of the Tansey salesmen on behalf of the retailers. Tansey salesmen did not solicit orders for distributors having exclusive territories, but they did advise and instruct the salesmen of those distributors in methods of selling Tansey goods. The manufacturer's salesmen did not receive commissions on sales in the exclusive territories.

The retailers who sold Tansey goods in many instances also sold similar merchandise made by other manufacturers, usually merchandise lower in quality and price than Tansey merchandise. The retailers' salesmen who sold Tansey products of course sold other lines as well, but the general sales manager of the Tansey Supplies Company stated that there was a growing tendency toward merchandise departmentization on the part of stationers, and that in many stationery stores salesmen were employed to concentrate their entire time upon carbon paper, typewriter ribbons, and other items used by the same consumers. In the organization of a purchaser, the salesman usually saw the assistant purchasing agent, the office manager, or the head stenographer.

At the close of each week, each salesman sent to the central office a route list showing the towns which he intended to visit during the following week, and an expense account for the week past. This expense account was accompanied by vouchers and showed the towns where the salesmen had been during the week. By comparing the route list for a given week with the salesman's expense account for that week, the sales manager could ascertain whether the salesman was covering the territory as planned. The sales manager also received from the salesmen weekly reports of sales, which, together with his visible index records showing past

purchases of customers, provided a check on the salesmen's current work.

In addition to the assistance which the company gave its retailers by means of its salesmen, the company sent each month to each of its retailers and to those of their salesmen who were selling its products a four-page leaflet discussing some specific sales problem such as "Sales Organization" or "Training of Salesmen." The company also distributed to retailers and their salesmen each month a house magazine discussing company policies, advertising Tansey products, and containing other reading matter of general interest. In addition the company provided its retailers with display materials and with circulars for distribution to their customers. The retailers, finally, were assisted by the company's national advertising. The company customarily advertised in the *Saturday Evening Post, Sunset, The Rotarian, Purchasing Agent, The Gregg Writer, Office Appliances, Geyer's Stationer, Pacific Stationer,* and *Typewriter Topics.* For space advertising the company spent an amount equal to about ½ of 1% of sales; and its expense for dealer helps was about 1% of sales.

The company's sales volume was increasing satisfactorily, and the executives were convinced that the company's plan of assisting retailers was sound. Each retail stationer carried hundreds of items in stock and, in the sales manager's opinion, those manufacturers who gave retailers the most assistance would be the ones whose products would receive the most attention from the retailers. The company planned, therefore, to increase the number of salesmen gradually, until it should have a force of 70 salesmen by 1932. It was expected that 15 of these 70 salesmen would devote their time to work with large users. The other 55 salesmen would solicit orders for retailers and would assist the retailers to increase their sales of Tansey products.

COMMENTARY: The chief problem presented by this case is regarding the soundness of the company's decision to increase the number of salesmen from 42 to 70.[2] On that question the evidence is inconclusive.

The company desired to increase its sales, but the advantage of an increased volume is not definitely indicated. Presumably a larger

[2] For discussion of use of missionary salesmen for consumers' goods, see Nyanza Company, 5 H.B.R. 454; Sussex Company, 5 H.B.R. 460; and Merritan Company, 5 H.B.R. 470.

volume of sales was expected to lower unit costs of production, but the cost of securing the increased volume should be weighed, of course, against the savings to be effected.

The Tansey Supplies Company was catering to a relatively inexpansible market. The quantity of carbon paper and other typewriting supplies used was governed largely by the amount of typewriting which business and professional firms needed to have done, in other words, by their business and professional activities; and the Tansey Supplies Company obviously could not, appreciably, influence those activities. Under these circumstances, the company could increase its sales rapidly only by encroaching upon those portions of the market previously enjoyed by competitors.

The company's plan of using more intensive solicitation as a means of increasing its sales promised better results than could have been secured by cutting prices. Nevertheless, that does not prove that the rapid expansion of missionary work contemplated would yield results commensurable with the cost.

Thirty per cent of the company's sales were made to the 6,500 retailers who were not exclusive agents. Thirty-six of the company's salesmen, it was estimated, spent 60% of their time in missionary work, and their efforts were responsible for one-third of the orders received from nonagency retailers. Hence, 60% of the expense of employing and maintaining 36 salesmen was incurred for securing 10% of the sales which the company made.

It is stated in the case that the total sales of the company to retailers were expected to increase in the same proportion that the number of salesmen was increased. The experience of other companies, however, did not warrant such an assumption. On the contrary, that experience indicated that by employing more missionary salesmen there would be a small increase in total sales but that a larger proportion of the sales made by retailers would be on orders taken for retailers by Tansey Supplies Company salesmen. To the extent that the new salesmen whom it was proposed to employ would write orders for dealers that the company would secure anyway, marketing expense would be increased without any materially offsetting gain. The fact that the retailers already were receiving a discount of 50% from list prices rendered the assumption of additional marketing costs a matter of grave concern.

The company's sales, it is stated, had been increasing at a "satisfactory" rate, yet a faster rate of increase was to be sought. It is not stated, however, whether the sales to retailers who held exclusive franchises, sales to other retailers, or sales directly to users had been increasing most rapidly. Evidence on the relative trend of sales in these three sections of the company's market, nevertheless, was pertinent to

the decision to increase heavily the amount of missionary work in the retailers' fields. Since missionary work was not carried on, furthermore, in territories in which exclusive franchises were granted to retailers, but exclusive agents were granted protection against competition from other dealers in the line and were allowed an extra 10% discount, a comparison of the results and of the trends of sales in the exclusive territories and in the nonexclusive territories would be enlightening. Such a comparison would aid in formulating an opinion regarding the merits of the two types of distribution and the relation of missionary sales work thereto. An analysis of the effectiveness of the company's technical sales service with typical large users also would be instructive.

The company's products were of a sort for which there was an almost universal market among business and professional firms. Inasmuch as there were many small users of such goods who bought in small lots, retailers' services were necessary for supplying a part of the market. The very circumstances, however, which made retailers' services necessary in distributing the goods to small users must have rendered the cost of missionary work very high, in ratio to sales, in the cases where the missionary men solicited orders from the small users. The market among large corporations presented a very different sort of problem. There the individual orders presumably were larger, the aggregate market greater, and the interest of the buyers in the technical qualities of the goods keener. In the latter market, however, competition was likely to be especially keen.

For the markets where it sold directly to users the company probably had records of experience to show the relative volume of sales to large and to small users, the typical size of orders from each class of customers, and the delivery requirements. These records could have been used advantageously in determining whether the efforts of the missionary salesmen were to be directed at all users indiscriminately or whether they should be concentrated on the large users.

The employment of missionary salesmen to train retailers' salesmen is still a moot question. A full statement of the results of this company's experience, with detailed facts and figures, ought to throw significant light on the subject. In the absence of these facts and without the other information which has been indicated as lacking, the company's practice in employing missionary salesmen is not one that safely can be recommended for adoption by other companies catering to a similar market.

September, 1927 M. T. C.

Strength Union Company[1] (B)

MANUFACTURER—PIPE UNIONS

Sales Promotion—*Discontinuance of Missionary Sales Work.* The company, a manufacturer of high-grade heavy pipe unions, had succeeded in gaining wide recognition and distribution for its products by means of advertising and missionary salesmen. Because the unions were well established, and also because they no longer were distinguished by special features from competing unions, the company decided to discontinue its missionary sales work.

(1925)

The Strength Union Company manufactured heavy pipe unions of good quality for use mainly on high-pressure pipe lines. For about 12 years the company had advertised extensively in 3 trade papers which covered the 3 principal markets for these unions—the power industry, the oil industry, and the railroads. In addition, it had employed from one to ten missionary salesmen to assist distributors and to encourage users to order Strength unions. In 1925 the company considered discontinuing the use of missionary salesmen on the ground that Strength unions had become so well known that missionary work was largely wasted effort.

The foundry, the machine shop, and the sales office of the Strength Union Company were located in New York. The company had manufactured pipe unions for over 15 years. Prior to 1910, sales of the company had been mostly local, and although the company had placed a trade-mark on its products, that trade-mark had not gained recognition among consumers. The products were sold purely on a price basis in competition with numerous other makes of pipe fittings. About 1910, however, the company started an advertising campaign in a trade paper of national distribution in the power field to exploit patented improvements which the company had made in its unions. This advertising emphasized the patented features of the unions and several other features which differentiated the Strength unions from competing unions. Many of the competing unions prior to 1910 required leather or rubber gaskets to keep the joints from leaking. The

[1] Fictitious name. See also Strength Union Company (A) and (C), pages 166 and 372, respectively.

Strength unions had a ground metal-to-metal ball joint which did not require the use of a gasket or any sealing compound. Although the company continued, after 1910, to manufacture a few light unions sold wholly on a price basis, it specialized in the manufacture of heavy, durable pipe unions and a few other steam-fitting specialties, such as flange unions, elbows, and tees. The company directed its advertising to engineers, steam fitters, and master plumbers, since those were the individuals who, in most industrial factories and power stations, specified or requisitioned pipe fittings. Purchasing agents frequently did the actual purchasing, but they seldom determined the brand to be bought. By advertising and the use of missionary salesmen the company had established a recognition for its products and a reputation for quality which lifted the products out of the strictly competitive class into a class of specialties which engineers in many instances specified in order to insure lasting and tight-fitting pipe connections.

When the company first began to distribute its products nationally, it had followed, in general, a policy of making certain supply firms its exclusive distributors. In the oil fields, for example, it had appointed as exclusive distributors two companies which had branches in most of the oil producing centers. To secure distribution of unions for use in power stations, factories, and large buildings, the company in most instances had appointed as exclusive distributor a supply firm in each large city. The steam fitters' and plumbers' supply firms sold to steam-fitting or plumbing contractors and directly to power stations and large industrial organizations such as steel mills. The company usually had four or five regular salesmen who called upon the distributors.

In addition to its regular salesmen, the company, after starting its national advertising campaign in the trade papers, regularly had employed a force of missionary salesmen which varied in number at different times from one to ten. These salesmen called upon engineers in power stations, in industrial factories, and in contracting firms to demonstrate the superior qualities of Strength unions in order to encourage the engineers to specify those unions for use in their plants. These salesmen also called upon steam fitters and master plumbers in large industrial companies and upon plumbing and steam-fitting contractors who were customers of the supply firms. The salesmen took orders, which were filled through local supply firms representing the company.

The company had found that the use of these salesmen helped to introduce Strength unions in many places where the supply firms with their large line of other products had not succeeded. The missionary salesmen reduced the sales resistance which the supply firms had to overcome and secured more customers for them.

The sales methods of the company had been successful and its sales volume had increased steadily. The company gradually had discontinued its policy of granting exclusive distribution franchises to supply firms and had adopted instead a policy of selecting two or more large distributors in each large city. The Strength unions became so well known among engineers and contractors that the company found that the use of exclusive distributors limited its sales volume; contractors in many instances purchased regularly from one supply firm and rarely split their purchases. In 1925 the company had one missionary salesman and three salesmen who visited supply firms. The regular salesmen, because of their large territories, were able to call upon supply firms only once or twice a year.

Orders came in regularly from the supply firms which carried the Strength unions, without personal solicitation by the salesmen. About 60% of the company's sales were on reorders.

The company had added no new features to its products after 1910, and by 1925 other companies were advertising unions for high-pressure pipe lines which were of a quality practically equal to the Strength unions. In 1925 the Strength unions, therefore, were coming to compete more on a price basis than had been the case during the first ten years that they had been advertised. For two or three years preceding 1925 the missionary salesmen had reported that in practically every instance the persons upon whom they called already were acquainted with Strength unions and their advertised advantages. The missionary salesmen in the first few years had turned substantial orders over to local supply firms. By 1924, however, the annual orders secured by a missionary salesman had diminished to a point where they were unimportant.

One official of the Strength Union Company advocated the discontinuance of the missionary salesmen. These salesmen had been employed during the period from 1910 to 1925 to introduce the products and to demonstrate their advantages to people who were not acquainted with them. In 1925, however, conditions indicated that Strength products were well known in the trade.

The expense of using missionary salesmen had increased threefold per salesman over the cost prior to the beginning of the World War. For missionary salesmen the company usually had employed young men, in many instances college graduates. In 1925 it was necessary to pay on of these salesmen about $50 a week for salary and about $75 a week for traveling expenses. While sales expenses were increasing, the margin of profit gradually was decreasing because of the increasing competition.

Another official of the company urged that it was a mistake to slacken the sales effort. The regular salesmen, since they called on wholesale supply firms so infrequently, were not in a position to give much sales help to those distributors. In some instances those salesmen called upon large users of unions to encourage the use of Strength unions, but they ordinarily did not have the time to call upon the numerous smaller users. Supply firms, because of the large number of items in their lines, ordinarily did not push any one item. Their salesmen acted rather as order-takers. This official was convinced that missionary salesmen justified their expense by keeping the name of the unions before users or prospective users and by combating tendencies toward the substitution of other unions on a price basis. The company decided, in 1925, to discontinue the use of missionary salesmen.

COMMENTARY: This case illustrates that after a product of this type has become generally known and its merits recognized, promotion of sales through missionary salesmen is less needed and less effective than during the introductory stages of distribution.[2] During the first years of advertising, moreover, the Strength union had special characteristics which individualized it. The advertising stressed these features. Personal solicitation of large users to call the merits of the union to their attention and to induce them to adopt it or ask for it from their supply firms was aggressive selling and probably effective.

After years of advertising and selling, however, the value of such demonstration became less. Moreover, by 1925 the patentable features of the product no longer belonged exclusively to this company. The product that had been a specialty was becoming more or less of a staple. Missionary salesmen had no unique message to present to the consumer and no unique buying motive to which to appeal. In view of the decreasing effectiveness and rising costs of such promotion, it was advisable to discontinue it.

June, 1926 N. H. B.

[2] See also, for further discussion of use of missionary salesmen, Nyanza Company, 5 H.B.R. 454; Sussex Company, 5 H.B.R. 460; Merritan Company, 5 H.B.R. 470; and Tansey Supplies Company, page 290.

Maxman-Timball Company[1]

MANUFACTURER—COPPER BOILERS AND EXPANSION JOINTS

Sales Promotion—*Use of Missionary Salesmen to Assist Manufacturers' Agents.* The company, which manufactured copper boilers and piping, expansion joints, and other plumbing equipment, sold the expansion joints in New York City through its own salesman, in New England through two salesmen who combined selling and missionary work, and in the Middle West through 26 manufacturers' agents. In 1925 the company decided to employ as a missionary salesman for the western territory an engineer familiar with the company's products, who would solicit orders for large special jobs as well as call upon users and potential users in the industries constituting the company's chief markets for expansion joints.

Sales Promotion—*Use of Missionary Salesmen to Assist Wholesalers.* The market for copper boilers made by the company, which also manufactured copper piping, expansion joints, and other plumbing equipment, was limited to New England, where it maintained one salesman, who sold chiefly to wholesalers. In 1923 the company employed a missionary salesman who called upon plumbers in this territory but took no orders. In 1924 the company decided to continue its missionary work for boilers but to divide the New England territory between two men, each of whom would both sell and do missionary work.

(1924-1925)

The Maxman-Timball Company, located in New England, manufactured copper boilers for storing hot water for domestic use, copper piping, jacketed kettles, expansion joints, and miscellaneous special products, and it also manufactured and installed complete refining systems for the manufacture of chemicals. The company's chemical equipment business was operated entirely separately from its other business in respect to sales. All salesmen for the refining installations were technical engineers; the number of potential customers was small; and each job amounted to from $100,000 to $1,000,000.

In marketing its expansion joints and copper boilers, the chief products of the nonchemical branch of its business, the company was faced with the problem of deciding upon methods of sales promotion. In this connection the company experimented with the use of missionary salesmen. After having done missionary

[1] Fictitious name.

work for its copper boilers for two years, the company, in 1925, contemplated employing missionary salesmen for its expansion joints.

The Maxman-Timball Company had been in continuous operation for more than 75 years. During that time its products had been changed radically. The manufacture of boilers had been continuous, but the business in expansion joints had been developed since 1912. At one time, the major part of the company's business had been in cornices and other metal roofing work. Those products, however, had been discontinued entirely. A water sprayer for use by power plants had been an important product at one time. When sales of the sprayer had begun to fall off, the company had made a market survey which showed that there was no future for that product, inasmuch as power plants were being located near plentiful supplies of water so that demand for the sprayer, which served to conserve the water supply, would continue to decline. In view of this, the company had discontinued practically all sales promotion and advertising for that line and merely had sought, while some demand for the sprayers yet remained, to realize what advantage it could from the reputation which it previously had acquired as a manufacturer of sprayers. Decisions as to what to make were in the hands of the sales manager and the administrative officers.

The market for copper boilers such as the company made was restricted to New England. In other parts of the United States, iron boilers were used. Prices of copper boilers were about three times as high as prices of iron boilers. It had been suggested at various times that the company should undertake to extend its market for boilers. The company had decided, however, that the cost of educating the public outside of New England, where copper boilers had been the first to be used, to the advantages of copper boilers would be prohibitive for one manufacturer. Moreover, the company's expansion joints, particularly one type for which the company held a patent, were more profitable than were the boilers, and consequently the company preferred to devote its major sales efforts to that line.

Until 1923, for the nonchemical part of the business, the company had maintained one salesman in New England. This salesman's sales efforts for boilers had been supplemented by a limited amount of advertising in plumbers' trade papers. In 1923, how-

ever, the company had decided to discontinue advertising in plumbers' journals and, with the money it customarily spent for that purpose, to employ a missionary salesman for the boilers. This step was recognized as an experiment. The company sold the boilers chiefly to wholesale firms handling plumbers' supplies. In addition, it sold some boilers in large sizes directly to plumbers and made some sales to manufacturers of gas heating equipment. The missionary salesman whom the company employed was to call upon plumbers to encourage them to purchase the company's boilers in preference to competing boilers, but he was to take no orders. During the first year of missionary work, the company's sales of boilers increased 10%.

In 1924 the company had decided to continue its missionary work for boilers but, instead of having one man do missionary work exclusively and one sell exclusively, to divide the New England territory between two men, each of whom would both sell and do missionary work. This change was made primarily because it was less expensive to have the territory divided than to have two men traveling in the same territories. The combined missionary men and salesmen spent a large part of their time calling upon plumbers who bought from supply firms. Frequently the salesmen would go for several weeks without securing an order. The salesmen were instructed to call about four times a year upon the larger plumbers, comprising about 20% of the total number, and once a year upon the other 80%. Sales analyses had shown that the plumbers who made up the 20% constituted the market for about 80% of the company's boilers. In 1924 the company also resumed its advertising in plumbers' trade journals. The general sales manager, who also controlled the company's advertising, was not convinced that the results of this advertising were commensurate with the cost, since the journals circulated nationally, whereas the company's market for boilers was limited to New England. In view of competitors' advertising, however, he deemed it unsafe for the company not to advertise. Sales of boilers had continued to increase by about 10% each year.

In 1925, after having done missionary work for its boilers with satisfactory results, the company contemplated doing similar work for its expansion joints.

Maxman-Timball expansion joints were of two types, one of which was unpatented and one patented. Competition on joints

of the unpatented type, which were used chiefly by power plants, was keen, and the company's sales of that type were small. The patented joints had special features that distinguished them from competing expansion joints and rendered them superior to other makes. In view of the special features, Maxman-Timball joints were higher in price than other joints used for the same purposes.

The company's patented joints were for use on pipe lines through which steam or hot fluids passed. The joints were placed at intervals on the pipe lines and were so constructed as to allow for the expansion produced by the heat.

The largest single market for the patented joints, which ranged in price from $50 to several hundred dollars each, was among central stations for heating groups of buildings. In many cities, groups of offices, stores, and other buildings were heated by central plants, often operated by local public utility companies. College buildings also in many instances were heated centrally. Sales of expansion joints for central heating frequently were made, directly by the company or through its representatives, to heating contractors employed to install heating systems. Consulting engineers who in their specifications named makes of equipment to be used and were also influential in this market. In the four years 1920 to 1923, 49% of the company's sales of the patented joints were for central heating. Other users were automobile manufacturers, iron and steel manufacturers, oil refiners, pump manufacturers, manufacturers of chemicals, rope manufacturers, and manufacturers of soaps. The company had sold the expansion joints to 40 different industries.

Most of the company's sales of expansion joints were for new work. Sales for replacements were infrequent, and no repairs were required. In value, unit sales of the joints ranged from $50 to $50,000. There was no typical unit of sale, and the sales volume varied widely from month to month. Annual sales, exclusive of occasional very large orders, amounted to approximately $500,000. The joints were standard, but, except for a few of the more common sizes, the company did not carry stocks. More than 150 sizes were made, and demand was so sporadic that it was impossible to forecast accurately what sizes would be ordered. For several years only one or two joints of a particular size might be sold, and then the company might receive an order for a hundred joints of that size.

In New England, the expansion joints were sold by the same men that sold the copper boilers, the piping, most of which went to the paper industry, and the jacketed kettles, which were sold chiefly to confectionery manufacturers. In New York City, a man was maintained for the sale of expansion joints, although he would take orders and answer inquiries for the company's other products. In the northern states east of Omaha and west of the New England states and New York City the company sold through manufacturers' agents, who also sold other products. The additional lines carried by some of the company's agents in the Middle West were such that those agents made the larger part of their sales to power plants, rather than to central heating stations and heating contractors. This situation resulted from the fact that the company originally had selected the agents to sell its water sprayers. Since the time when demand for the water sprayers had declined, the company had not deemed it expedient to change its agents; the company was looking for new products to add to its line and was unwilling to make any change in its agency arrangements until those products had been determined upon. There were 26 agents selling the company's expansion joints. On all sales of the company's expansion joints made in their territories they received a 10% commission. All shipments of the expansion joints were made from the company's factory. The company had no direct control over the activities of these agents, and it did not know how often they covered their territories. Ordinarily the company made about 33 1/3% of its sales of expansion joints through these agents.

The company's New York salesman was paid a salary and, in addition, a commission on sales in excess of an amount sufficient to absorb his salary and expenses. This arrangement operated as follows. From the beginning of each year, commissions on the salesman's sales were computed at 10%. Until the commissions so computed equaled the salesman's salary for the year plus his estimated expenses for the year, he received no commission. After that point was reached, the salesman received a 5% commission on sales for the remainder of the year. The New England salesmen were paid on virtually the same basis.

The company had made no effort to develop sales in the South or west of Omaha. The sales manager was convinced that the company should concentrate its sales efforts upon its most profit-

able markets rather than try to get the widest distribution possible. Some sales were made in the South and West, however, as a result of the company's advertising. The company spent approximately 4% of its gross sales of expansion joints for advertising them in trade journals. It did very little direct-mail advertising. The sales manager stated that trade paper advertising had been effective in introducing the expansion joints originally, and since then in stimulating inquiries.

The salesmen of the Maxman-Timball Company, as well as the sales manager and an engineer at the factory, were prepared to give technical advice to purchasers on questions pertaining to use of the expansion joints, and also to supervise installations. These services were offered not so much as a sales argument as a means of protecting the company's reputation, inasmuch as proper application and installation of the joints were essential to satisfactory operation. Most consulting and designing engineers, however, did not welcome engineering assistance from the company. When they were employed for a job they wished to do it themselves. The expense of the technical service was not separated from the sales expense.

Whenever the company, either through inquiries received as a result of its advertising, through its salesmen or agents, or by other means, learned of a construction job in which a large number of expansion joints would be needed, it sent some member of the organization to the prospective customer to secure the order. These large jobs were not numerous, but they frequently were widely scattered. In New England and New York City the salesmen for those territories or the sales manager made the calls. The sales manager also negotiated for such large orders in the western territory. By 1925, however, it had become apparent that the sales manager could not do this work for the whole of the western territory. A man was needed to take care of the large jobs in the territory west of Cleveland. This work, however, would require only a small part of the time of one man. It was proposed, therefore, that the company should employ as a missionary salesman for the western territory a man who also could be sent to large prospective customers who were in the market for expansion joints.

The company decided to employ a man for missionary work as proposed. The man employed was an engineer familiar with the company's products. In addition to being prepared to solicit

orders for large special jobs of which the company learned, he was to call upon users and potential users in those industries which constituted the company's chief markets and also upon heating contractors and consulting engineers. On these visits he was to explain and demonstrate the advantages of the Maxman-Timball joints as compared with other makes. Such visits would not be for the purpose of securing immediate orders; any orders which the missionary salesman did obtain would be credited to the agents in whose territories the customers were located. The company proposed to pay this missionary salesman a commission on all orders which it received from his territory. The missionary salesman, however, preferred to receive a flat salary. The company therefore agreed to pay him a salary and expenses.

During the three years following his employment, the company was satisfied with the work done by the missionary salesman. He spent about 10% of his time in Chicago. During the remainder of the time, except when he was negotiating for orders for special large jobs, he traveled through the territory, working in cooperation with the manufacturers' agents. He devoted about one-third of his time to calling upon central heating stations to familiarize them with the merits of Maxman-Timball joints, so that when they needed expansion joints they would purchase that make. Each year he called at least twice upon each central heating station in his territory. Approximately 25% of his time was spent in calls upon heating contractors and consulting engineers. In the remainder of his time, he visited firms in other industries which used expansion joints. Ordinarily, he took few orders. The company allowed him freedom in planning his routes and in deciding whom to call upon. The company's check upon his work was orders received from his territory.

In New England and New York City, the company's salesmen did some work of a missionary character. That is, they not only called to solicit orders, but also called upon consulting engineers and upon users of expansion joints to acquaint them with the advantages of Maxman-Timball joints. In the territory between New York City and Cleveland, the company's agents were exceptionally active in calling upon central heating stations and heating contractors, so that missionary work did not appear to be necessary there. The general sales manager stated that with a better selection of agents in the Middle West less missionary

work would be needed. It was his opinion, however, that some missionary work would need to be done until the company had developed a full enough line so that the agents would be willing to devote their chief efforts to that line.

Sales of Maxman-Timball expansion joints of the patented type showed annual increases in excess of 10%. Sales in the first seven months of 1927 were as large as total sales of the joints in 1926. Central heating stations continued to be the largest market for the joints. Of total sales of the patented expansion joints, 68% were for central heating in 1924; 63% in 1925; and 65% in 1926.

COMMENTARY: Before entering upon a discussion of the main issue in this case, it is worth while to call attention to several other decisions reached by this company. It is significant that the company had segregated the sales organization for its chemical equipment business from the organization handling its other sales. This decision is in accordance with the principle which has been stated in commentaries on other cases[2]: namely, that when the markets for two or more lines are distinct and the volume of trade in each is large enough to support a separate sales force, the sales organization should be segregated. The second point to be mentioned is the company's merchandising practice in discontinuing active sales efforts for a line like sprayers when it became convinced that the market was decadent. The third point is the decision of the company not to attempt to stimulate sales of copper boilers outside of New England in territories where the common practice was to use iron boilers. Inasmuch as each family has a new hot-water tank installed only at very infrequent intervals, the task of changing the general preference from iron tanks to copper tanks undoubtedly would have required a prohibitive advertising expense, especially since the company could not have been sure of retaining for itself the major portion of such demand for copper boilers as was stimulated.

The main issue in this case is concerned with the performance of missionary work by the company's salesmen. The problem clearly is subdivided between missionary work for boilers and missionary work for expansion joints.

The missionary work of the company's salesmen on boilers in New England was of a goodwill type, rather than of the solicitation type which is used by so many other companies. In calling upon the large plumbers four times a year and upon other plumbers once a year,

[2] See Tinkham, Littell, Incorporated, 2 H.B.R. 507; Circle Auto Supply Company, 3 H.B.R. 172; American Locomotive Company, 3 H.B.R. 150; Rice Motor Company, 3 H.B.R. 154; Clipper Truck Company, 3 H.B.R. 163; Fishback-Harris Company, 2 H.B.R. 116.

the salesmen were not duplicating the work of the wholesalers who distributed the company's products. These missionary calls served to personify the Maxman-Timball Company to the plumbers and thereby to stimulate patronage for its products. Appreciation of the courtesy of this personal attention probably accounts for the increased purchases of the company's tanks by plumbers.

In selling expansion joints in territories outside the New England and New York markets the conditions which the company faced were very different from the conditions in the market for hot-water tanks in New England. The performance of missionary work on expansion joints in the middle-western market emphasized a weakness on the part of the manufacturers' agents, which the company recognized. The decision by the company to send its own salesmen to solicit large special orders in the Middle West also was evidence of the same weakness. When the company not only undertook to obtain the orders directly on large special jobs, allowing its agents their regular commissions on those sales, but also began to send its salesmen to large users for missionary work, the company was performing services which the right sort of agents should have performed. It is to be noted that in the territory between New York City and Cleveland the agents were so active that missionary work was not deemed necessary. This fact again emphasizes the weakness of the agents in other territories.

The company was marking time on its marketing plans in the middle western region, pending the addition of new products to its line which would warrant the selection of new agents. The existing agents, with the exceptions noted, were not securing satisfactory results in selling expansion joints, since they were primarily agents for power plant equipment. To remedy the shortcomings of the agents, the company was performing missionary work and thereby incurring expense. The amount of the expense involved was not large, to be sure, and the period during which it was to be incurred presumably was to be temporary. Nevertheless, the problem should not have been sidetracked as of minor importance, because it might rise again in the future under more embarrassing conditions.

The demand for expansion joints was so irregular that it at first appears that manufacturers' agents, who were selling several lines, should have fitted especially well into the Maxman-Timball Company's distribution plans. Nevertheless, the agents who were selected to sell sprayers generally were not efficient agents for expansion joints. If a new lot of agents were selected to sell expansion joints and whatever new product was added to the company's line, might they not also prove unsatisfactory for selling still other products which the company would add as it kept abreast of new industrial developments? In other words, it appears doubtful whether the extra expense which the company

was incurring for missionary work while it was marking time was building for the future. There seems, therefore, to be uncertainty as to whether the company would be able to count on having found a genuine solution for its sales problem when it had made a new selection of agents. This case thus brings to the forefront the fact that a company which employs manufacturers' agents has a much less tractable sales organization than a company has which employs only private salesmen. Yet a tractable organization is of great value in meeting changing market conditions.

In conclusion, a question is to be raised regarding the company's advertising policy. The company deemed its advertising of expansion joints profitable; perhaps its success in advertising the joints resulted from the fact that they had patented features to exploit. The company was advertising hot-water tanks, however, because it was afraid not to advertise, and the sales manager was skeptical of the worth of that advertising. Advertising undertaken in that spirit seldom is productive.

July, 1927 M. T. C.

Otway Machinery Company[1]

MANUFACTURER—MIXING AND SEPARATING MACHINERY

Technical Sales Service—*Methods of Charging for.* The company, in view of the technical nature of its mixing, separating, and other machines, deemed it necessary to extend to users designing and planning engineering service as well as erection service. The cost to the company of its engineering services was substantial and was not fully counterbalanced by payments from customers using the services; consequently the company's net earnings were unsatisfactory. The company's problem was to find a satisfactory means of meeting the cost of its engineering department; this might be done through levying a charge for engineering work separate from that for machinery or through including the full cost of the engineering work in machinery prices.

(1928)

In the latter part of 1927 the Otway Machinery Company engaged marketing counsel to investigate its general situation with a view to recommending measures for improvement. The company deemed its sales expenses excessive and was dissatisfied with its sales volume; the factory was operating at less than 75% of capacity. One of the specific points on which the company wished advice had to do with its engineering services to users.

The Otway Machinery Company, because of the technical nature of its products and the trial basis on which they were sold, deemed it necessary to render engineering service to users. This service was costly. Often a single customer required the services of an engineer for a month or more. The company for several years had endeavored with little success to collect the cost of its engineering work directly from the customers requiring such work. Many customers contended that engineering service should be provided free of charge, and the company continually was faced with the problem of the method to be followed in meeting the cost of its engineering department. Net profit on the business was unsatisfactory, and the company ascribed this, in part at least, to lack of adequate compensation for its engineering services. Among other possibilities, the company might undertake to operate its engineering department as an independent de-

[1] Fictitious name.

partment, to charge customers separately for machinery and for engineering work, and to secure its normal percentage of profit on its engineering services as well as on its machinery sales; or the company might include its engineering costs in its machinery prices and quote only those prices to customers.

Products manufactured by the Otway Machinery Company included mixing, separating, drying, and weighing machines. Some of the materials for which the machines were used were: limestone, lime, clay, coal, slate, shale, talc, soapstone, shells, tankage, fish scrap, bone, meat, bark, leather, emery, tobacco, ochre, umber, and sienna. In all, the company sold about 20 different machines; each of these was made in several models and sold in various combinations. Among the company's chief customers were cement manufacturers, lime manufacturers, manufacturers of abrasives, fertilizer manufacturers, and manufacturers of chemicals. Some industries were potential markets for a variety of the company's machines, whereas other industries could use but one type of the machines. Cement manufacturers, for instance, could use only one type, but the clay, lime, and fertilizer industries each was a market for several of the machines. The number of potential customers in the various industries was in most instances relatively small. The company estimated that there were, for example, only 200 cement firms, 50 emery mills, 200 acid phosphate manufacturers, 180 gypsum manufacturers, 75 producers of talc, and 500 manufacturers of lime.

At the suggestion of its marketing counsel, the company drew up the table given here as Exhibit 1, showing the average unit sale of its various machines and ranking the machines according to: potential demand in dollars; lack of competition; percentage of profit; and number of prospective customers. Rank was expressed by numbers, 1, 2, 3, 4, and so forth. When the rank of two or more machines was the same, they were given the same number.

The company's machines were sold not only individually but also in groups, since many of the machines supplemented each other and a user of one of the machines ordinarily was at least a potential user of other machines made by the company. About two-thirds of the company's sales were of individual machines. The company sought to promote its sales of groups of machines, but manufacturers requiring several supplementary machines of

the type made by the Otway Machinery Company generally bought the machines from several producers. A group of such machines commonly were connected by elevators and conveyors, and the Otway Machinery Company made this auxiliary equipment as well as the major machines.

EXHIBIT 1

UNIT SALES AND RELATIVE RANKINGS OF MACHINES MANUFACTURED BY THE OTWAY MACHINERY COMPANY

MACHINE	AVERAGE UNIT SALE	RELATIVE RANKING OF MACHINES			
		Potential Demand (in dollars)	Lack of Competition	Percentage of Profit	Number of Prospects
A	$ 1,000	9	10	5	6
B	1,000	11	8	5	9
C	1,500	7	2	5	6
D	800	19	10	5	13
E	2,500	10	11	6	8
F	3,500	8	6	4	8
G	1,500	5	12	5	7
H	700	6	13	5	5
I	370	20	7	5	12
J	1,600	15	4	5	11
K	1,300	16	5	5	13
L	1,000	3	15	2	2
M	800	13	17	5	9
N	2,500	4	3	1	4
O	1,200	12	9	5	8
P	125	14	14	5	12
Q	120	18	16	6	14
R	10,000	17	1	3	15
S	300	..	..	..	10
T	450	..	..	..	3
U	1,200	1	19	6	1
V	800	2	20	6	1

In addition to products of its own manufacture, the company purchased and resold, for use in its machines or in connection with them, such items as electric motors, pulleys, shafting, belting, and manganese steel wearing parts. Sometimes, moreover, the company had certain items such as elevators and conveyors made for it by firms situated in a purchaser's locality, in order to avoid heavy freight charges. About one-eighth of the company's total business consisted of sales of goods not of its own manufacture.

Single machines ranged in price from $100 to $10,000. The average order for a single machine amounted to approximately $2,000. Unit sales of groups of machines ranged from a few thousand dollars to $50,000. The auxiliary equipment required

for use with a machine or group of machines often cost more than the machinery. All Otway machines were patented and had special features which distinguished them from competing machines. The company did not sell on a price basis, but rather on the basis of quality and service, and its prices were higher than those of many of its competitors. The president stated that the company had the reputation of being a high-priced firm which built nothing but the best, but which perhaps carried the refinements in its products to an extreme. The company was of the opinion that in some instances the low prices of its competitors resulted from a lack of knowledge of costs on their part; in other instances the low prices were the result of inferior, though perhaps adequate, quality of product or of inferior service. Price competition was looked upon by the company as one of the most serious factors in its marketing situation. Total sales of the Otway Machinery Company, not including direct income from the engineering service, normally amounted to between $700,000 and $800,000 annually. Sales in 1927 were less than $600,000, but the company planned to reach its normal volume in 1928. Sales of individual machines fluctuated widely from year to year, but the sales curve for total sales was fairly smooth in periods of normal business activity.

The company's terms were 35% of the total contract price upon acceptance of the contract, 35% against bill of lading, 20% 30 days from date of bill of lading, and 10% 60 days from date of bill of lading. The company sought to maintain these terms in all instances but was not always able to do so.

The company's machines in general were made to order, although in basic construction they were standard. It was impracticable to carry many of them in stock. The requirements of different users varied widely and the demand was sporadic. The company, for instance, sold 20 of one type of machine in one week and then did not sell another machine of that type for three years. Furthermore, improvements constantly were being made in the designs of the machines. The president stated that, as in the case of machine tools, the company's products usually became obsolete long before they were worn out. The changes that constantly took place in the designs of such machinery meant that the second sale of a particular type of machine to a customer involved almost as much sales effort as the initial sale. There

were no repeat purchases in the sense of reorders of identical machines without preliminary negotiations and examination into the offerings of competitors. Each sale was made on a highly competitive basis.

It was necessary for the Otway Machinery Company to carry large stocks of repair parts. In the plants in which they were used the company's machines were basic, so that the plant operations were dependent upon them. When the machines broke down, repairs were required at once, but users seldom carried repair parts in stock.

The Otway Machinery Company sold its products almost exclusively directly to users, by means of its own salesmen and manufacturers' agents. In 1927 the company had three salesmen, with headquarters at Pittsburgh, Chicago, and New York, and two manufacturers' agents, with headquarters at Los Angeles and Salt Lake City. All these men were engineers and had been trained in the company's plant. Each of the manufacturers' agents sold two or three allied lines in addition to the Otway line. The sales manager stated that they practically were salesmen of the company. The agent at Los Angeles received a 10% commission on all sales of the company's products in his territory and the agent at Salt Lake City, because of the smaller potential sales volume in that territory, received a 15% commission. The company's salesmen were paid minimum salaries and quarterly bonuses based on the difference between a sales expense figure deemed reasonable by the company and the actual sales expense. A salesman's compensation, exclusive of expenses, ranged from $4,000 to $6,000 a year.

The company made a small proportion of its sales through machinery supply firms, to which it gave a 10% discount from the prices to users. This method of sale had not proved satisfactory. At various times the company had undertaken to interest supply firms in its products. The sales manager, for instance, had spent six months with one large supply firm instructing its salesmen in the technicalities of the products and in methods of sale. The sales manager stated that the intervals between sales of any particular type of Otway machinery were often so long that before negotiations for a second sale were under way the supply firm's salesmen had forgotten what they previously had learned about the product. The frequent improvements in the products

also made it difficult to keep distributors' salesmen posted. Distributors, moreover, seldom could be induced to carry adequate stocks of repair parts. The sales manager gave it as his opinion that distributors found it difficult to do business on a 10% gross margin and that the company could not grant a larger discount so long as it had to bear the burden of advertising, of training distributors' salesmen, of carrying stocks of repair parts, and of providing engineering service. It often happened that, in the case of an order received from a distributor, the distributor's sole part in the transaction was to refer to the company a customer who inquired about machinery such as the company made and then, after the company had conducted long negotiations with the customer, to send in the final order. In some instances the distributor shared the discount with the customer.

The company undertook to keep its salesmen and agents occupied answering inquiries received from customers, and the company's advertising was designed to provoke inquiries. Whenever they had any spare time, the salesmen called upon the company's most desirable customers and prospective customers. A long period of negotiation usually preceded a sale.

The company used both direct-mail and trade paper advertising. Advertising expense amounted to about 4% of net sales, or to about $22,000 in 1927; this included clerical expense as well as costs of materials, space, and postage, but did not include any portion of the salaries of executives in charge of advertising. There were 36,000 names on the company's complete mailing list, and the company sent out approximately 1,000 circular letters a day by first-class mail. The mailing list included for each firm to be circularized the name of the president, of the vice-president in charge of production, and of all department heads having to do with manufacturing. For convenience in circularizing, the complete mailing list was broken down into five minor lists, known as A, B, C, miscellaneous, and special

The "A" list included the most important users in those industries which constituted the company's major markets, cement manufacturers and lime manufacturers, for instance. The persons whose names appeared on this list were circularized once a week. Each circular generally dealt with a particular machine. On the "B" list were the names of the manufacturing executives in firms in those industries which constituted excellent potential

customers but which needed less machinery or less expensive machinery than the users on the "A" list required. These users were circularized once every other week. The "C" list included reasonably good prospects and was circularized once a month. The special list included users of inexpensive machinery and was circularized once every two months. The company, for instance, made small machines, ranging in price from $100 to $500, for laboratory sampling work. It also made inexpensive machines for analysis of coal for which all large users of coal that purchased on a B.t.u. basis were potential users. The miscellaneous list included firms which the company deemed only fair prospects, and the company circularized this list once every three months. Of the 36,000 persons whose names were included on the mailing list, the company deemed 10,000 first-rate prospects; the 10,000 persons represented only about one-third that many firms, since several persons in each firm were circularized. The company also was a consistent advertiser in trade papers read by its actual and prospective purchasers. In addition, it supplied its 10,000 best prospects with attractive catalogs. In its advertising the company stressed the quality and performance of its machines and the fact that it was prepared to render engineering service to machinery users.

It was the experience of the Otway Machinery Company that large customers generally bought their requirements of its machinery through their purchasing agents upon recommendations from engineers, superintendents, division managers, or operating heads, and that small firms customarily bought through their owners, presidents, or other high executives. The company had found it advisable to cultivate the goodwill of engineers and factory superintendents in large firms and of factory superintendents in small firms.

The Otway Machinery Company employed two types of engineers. Engineers of one type were technical school graduates and were competent to make engineering studies, to recommend to machinery users the type, character, and arrangement of equipment required, and to draw the detailed plans and specifications covering building and equipment. The other type of engineers supervised the installation of machinery and put it into operation. In 1927 the company had ten engineers of the first type and six of the second type; the full time of these men was not always

taken up with service to customers. Otway machines were highly technical and for satisfactory performance had to be carefully installed and properly used. It had been primarily to protect the performance of its machines that the company had developed its engineering department. The engineering service also was expected to promote sales of groups of machines and to raise the company above competition on a strictly price basis.

Firms purchasing machinery such as the Otway Machinery Company manufactured, particularly those firms which planned to install a group of several supplementary machines, often required expert advice as to plant design and layout of equipment. Often major building changes or new buildings had to be designed to accommodate the new machinery. And frequently the purchasers required advice as to the exact size and type of machines to use and as to the auxiliary equipment to install. Otway salesmen, who themselves had thorough technical training, could give potential customers preliminary advice, but the major work of planning had to be done by the engineers. Often this work for a single customer required several months of an engineer's time and involved several trips to the customer's plant. Sometimes, of course, only a little planning work was required, and many customers required no engineering service at all. This was true for the most part of the large number of customers who bought only individual machines, and who accounted for two-thirds of the company's total machinery sales.

The cost of the work of the planning engineers was particularly burdensome to the company on sales involving a large quantity of resale merchandise or of merchandise made for the company by local manufacturers. In the case of one bin-and-hopper system which the company sold, only $1,500 of the total sale price of $15,000 represented the company's own machines, on which it could realize its normal profit; on a large part of the equipment involved, the company's gross margin was only 10% to 20%. Yet the engineering cost on this job, because of the special nature of the work, was larger than it would have been had only the company's own machines been involved. Sometimes the planning engineering expense was proportionately much higher on small jobs than on large. There apparently was no direct relation between the size of a job and the engineering expense which it involved. The general manager of sales stated that the

ordinary job to which a planning engineer was assigned involved an engineering expense of from 3% to 6% of the amount of the job.

The company's erection engineers were not called into service until the machinery had been sold and shipped. Their work was to supervise the installation of the machines and to turn them over to the purchasers in good operating condition. On practically all sales of groups of machines, and on some sales of single machines, the services of the erection engineers were required.

It had been the theory of the Otway Machinery Company that its engineering department should be maintained as a service to customers and should not be operated at a profit. The company's aim had been to secure for its engineering service, by direct charges to customers using the service, an amount sufficient to meet the actual cost of the service. The company had been of the opinion that such a charge should be in the form of a fixed percentage of the total amount involved by the job contemplated by the customer. The sales manager stated that some competing manufacturers offered designing and planning service and that some did not, and that some competitors made separate charges for such service while others included the cost of the service in the price of the machinery. In the case of the erection engineers, the company undertook to levy a charge of $15 a day and expenses. This was stated to be the customary charge for such work.

In spite of the company's intention of making the engineering department self-supporting through direct charges for engineering work, separate from the charges for machinery, the direct income for work of the engineering department was substantially less than the cost of maintaining the department. The sales manager estimated that, with a normal sales volume of $700,000 to $800,000, the average direct cost to the company of its designing and planning engineering work, including engineers' compensation, traveling expenses, and cost of materials used, was $50,000 annually, and that the direct annual income from that work was $20,000. The direct cost of the erection engineering service he estimated at $20,000 a year and the income from that service at $8,000. These amounts varied widely from year to year.

The company charged the total cost of its engineering services to "selling and operating overhead" and added the direct income from its engineering services directly to net profit. Selling and

operating overhead included all expenses of the business other than manufacturing costs and factory overhead. With an annual sales volume of $800,000, the company's selling and operating overhead normally was 30% of sales. Overhead in 1927 was 36% of sales.

The company deemed average net earnings of 15% of sales during a normal year to be fair and satisfactory. Under conditions as they existed in 1927 the company was able, with a reasonable division of sales between its own machines and resale merchandise, to show net earnings of from 10% to 12%. On a large part of its resale merchandise, the company took a gross margin of 25% or less, which was insufficient to meet the selling and operating overhead if a proportionate share of that expense was charged against the resale goods. On a certain class of resale merchandise the company's gross margin was 50%. It was impossible, in the company's opinion, to increase the gross margin on resale goods. On goods of its own manufacture, the company ordinarily received a net profit of 18%. The selling price which would allow that net profit was found by multiplying the manufacturing cost and manufacturing overhead for a machine by 2.25. The 18% net profit which the company undertook to obtain on sales of its own machines was reduced by the lower profit on resale merchandise, so that the average net earnings for the entire business were 10% to 12%. The company wished to raise the average net earnings to 15%.

There apparently existed among many machinery users a belief that machinery manufacturers should supply free whatever service their machinery required until it was turned over to the purchaser in good operating condition. On the other hand, there were machinery users who were willing to pay a separate charge for services such as the Otway Machinery Company gave.

It often happened that a firm in the market for a group of mixing and separating machines asked the Otway Machinery Company, and perhaps one or two competing companies, to quote prices on the machines required and to draw up the necessary plans for their arrangement in the factory. Generally, when extensive planning and designing work was required, the Otway Machinery Company before beginning that work required assurance from the prospective purchaser that he would buy his machinery requirements from the company. Sometimes, how-

ever, when a large purchase was involved, the company waived this requirement and made the necessary plans in the hope of securing the order.

The company, also, whenever possible, entered into a contract covering the engineering work with machinery customers requiring extensive service of that kind. However, when insistence upon this contract arrangement in the company's opinion would jeopardize relations with a machinery customer, the company dispensed with the contract. When the contract was dispensed with, the company undertook to collect from the customer as much as possible of the cost of the engineering work as a charge separate from the charge for machinery. When the total cost of the engineering service could not be collected as a separate charge, the company added as much of the cost as possible to the price of the machinery. Usually such charges had to be added to the cost of the small, auxiliary machines, since the company and the customer usually agreed upon the price of the large machines before the order was placed.

The company had difficulty not only in securing payment for the work of its designing and planning engineers but also in securing payment for the work of the erection engineers. Most individual machines which the company sold were installed upon trial. In many instances the installations were simple and could be done satisfactorily by the purchasers without technical assistance from the company. In other instances, however, the installations were more complicated and, in the company's opinion, expert engineering service was required. Sometimes purchasers, to avoid paying for the services of an installation engineer, installed the machines themselves. Then, if during the trial period the machines failed to function properly, the purchasers expected the company to send men to their plants to remedy the difficulty free of charge. The company was unwilling to have one of its machines returned during the trial period, and consequently it was compelled to send an engineer to a user's plant if during the trial period the machine did not operate satisfactorily, regardless of the cause of the difficulty or the possibility of securing payment for the engineer's service. The result of all this was that some customers paid for installation service, some paid part of the cost, and some paid nothing at all.

The company was dissatisfied with the situation as far as its

engineering service was concerned. It was necessary to offer the service in order to safeguard the reputation of Otway machines for satisfactory performance, but it had proved difficult or impossible in most instances to get those actual or potential machinery customers who made use of the service to pay for it as such.

The company was unwilling to offer free engineering service to customers for several reasons. With engineering service nominally free, the cost of the service must either be distributed over all the machines sold or must be taken from net earnings. If the cost was distributed over all the machines sold, all customers, whether they required such engineering service or not, would have to bear a portion of the cost. Moreover, the machinery that the company was selling was highly competitive and an addition to the prices of Otway machines, which already were higher than prices of most competing machines, would, in the executives' opinion, interfere seriously with sales. If no direct income was received from the engineering service and if the percentage of net profit which the company deemed fair was secured, an average increase in machinery prices of as much as 6% probably would be necessary. An additional reason for not offering engineering service free was that such a policy might lead to abuse of the service. The president also was of the opinion that customers seldom appreciated what they were given without charge.

In addition to its problem of obtaining compensation for its technical service, the company had the related, although seemingly contradictory, problem of getting machinery customers to make use of its engineering service. The president stated that there was a widespread prejudice among machinery users against employing the engineers of a machinery manufacturer for work involving the naming of types and makes of machinery to be installed. This prejudice was based on the theory that the engineers of a machinery manufacturer, of course, would recommend the machinery of that manufacturer regardless of whether it was the most suitable that could be obtained for that purpose. Thus, although a firm might wish to purchase the major one of a group of machines from the Otway Machinery Company, it might be unwilling to employ Otway engineers to design the building and plan the equipment layout for fear those engineers would specify Otway auxiliary machines and equipment even though competing products would be better for the purpose.

The Otway Machinery Company wished to have its planning engineers used by machinery customers for several reasons. In the first place, the executives believed that the company's own engineers, because of their specialized training in the company's plant as well as their general technical training, were more competent than were independent engineers to make plans involving the use of Otway machines. In the second place, the company usually had to bear the expense of making the plans even if the purchasers employed independent engineers. Those engineers, recognizing that the manufacturer's engineers were particularly competent in all matters involving use of mixing and separation machinery, usually asked the company to submit design and layout plans. No charge could be made for this work, but, unless the company complied with the request, the opportunity to make a machinery sale was lost. If, on the other hand, the consulting engineers made their own plans, they frequently did not follow standard practices, and this increased the company's costs. Moreover, if a prospective machinery customer employed Otway engineers to design the plant and layout, the customer was more likely to purchase its machinery requirements from the company than it was if it employed other engineers. This would tend to increase the company's sales of groups of machines and auxiliary equipment. The president stated that, as it was, only a very few customers bought from the company the bulk of their requirements in its line. "They buy one machine of us," he said, "but have their engineering done elsewhere and buy their elevators, motors, transmission, and so forth, of local firms."

For several years the company, in its advertising and through its personal contacts with customers, had been striving to educate them to a willingness to employ the engineers of reputable machinery manufacturers and to pay for the service rendered. As a step in this direction the company, in 1927, had decided to publish a house organ for distribution to the 10,000 best names on its mailing list. This publication was attractively printed and was issued every other month. Each issue contained at least one technical and imformative article on some problem involved in the use of machinery of the type made by the company. The house organ also contained brief articles designed to increase the readers' confidence in the engineering service of reputable equipment manufacturers; to encourage purchasers of machinery to

have the machines properly installed by competent engineers; to establish the idea that expert engineering service should be paid for by the machinery buyers receiving the service; and to discourage purchasing on a price basis.

One solution proposed was for the company to operate its engineering department separately from the sales and other departments and to make one charge to customers for their machinery purchases and another for the engineering service given them. If this were done, the company probably would charge for any particular engineering job an amount equal to 2.25 times the direct cost to the company of the job. Under this plan, the cost of the service would be charged to the department and would not be included in selling and operating overhead. The engineering department would be expected to bear its share of that overhead. The proposed plan would require, the sales manager estimated, an additional advertising expenditure of about $10,000. It would be necessary through advertising to make the company's plan clear to potential customers and to win their support.

The marketing counsel engaged by the company prepared a detailed analysis of the company's situation and early in 1928 presented a plan for meeting the difficulties. That part of the plan which dealt directly with the problem of charging for engineering service was as follows:

175. Under the general class of obstacles due to lack of clear-cut sales policies we list the following:

A. Difficulty of selling engineering service:

1. Of selling units (groups of machines)
2. Of outside engineers
3. Price competition
4. Of selling complete plants

176. It will be seen that if the difficulty (A) is removed, the subsidiary four difficulties thereunder will, on the average, be automatically removed. That is, if the Company is retained in an engineering capacity, its recommendations will generally be followed. So that it will eliminate much of the price difficulty, outside engineering difficulties, and the difficulties of selling units and plants.

177. So that we can conclude that the Company should sell and cause its trade to buy Engineering Service—apart from machinery. It should offer for sale Engineering Service as something entirely distinct from machinery. We understand that this has been the *intent* of the Company in the past. When we come to

examine the EXPRESSION of this intent in words, we find no clear-cut statement to the effect that engineering is a salable commodity. We do find an effort made to cause the trade to *infer* that fact.

. . . . . .

180. Now as we review the company's advertising and statements to the trade, what do we find? First, that the Otway Machinery Company are machinery manufacturers—that its mission is to *serve*—that it believes it can *help* those with a problem. Why? Evidently because the Otway Machinery Company, having machinery for sale, wants to sell it. So it offers to serve and to help—just as hundreds of other machinery manufacturers do. Machinery and Service are so mixed and intertwined that they cannot be untangled into two different and wholly separated things, both of which are charged for. For wherever Engineering Service is spoken of, it is mixed with machinery. So this analyst receives the impression that any reader would receive: that Engineering is GIVEN FREE or at least is included in the price of the machines. There is no clear-cut statement to the contrary.

181. So here we find the difficulty in securing engineering fees—the service is apparently offered as included in the price of the machinery; the prospect makes inquiry for the machine or machines in which he is interested; his inquiry is answered without making clear that engineering is charged for; later (in some cases) he is told that he has bought engineering. This is news indeed—his natural reaction is not to pay for anything he has not clearly given an order for. Or, if not told, the engineering fee is added without notice. Thus engineering by the Company's own action, as well as expression, is *included in the cost of the goods.* Thus, a plant inquires; engineering is seen by the client to be required; so a price is quoted *above* the regular machine price. The customer has paid for engineering—actually. But so far as he knows he has bought a machine at a certain price—and the Company has been wonderful in giving help and advice cost evidently included in the price of the machine.

. . . . . .

184. If a clear-cut policy as regards engineering fees is adopted and then the engineering sold just as vigorously as any machine, this difficulty will gradually evaporate. With it will go the attendant difficulties of unit and plant selling, much of the price competition, and difficulties with other engineers. For if the Company outsells others on engineering service, they will tend to eliminate the interference of other consulting engineers; and if the Company charges for its service and gets an order therefor, few business men are likely to reverse themselves by refusing to follow recommendations made and paid for. We believe that the Company will quickly grasp the value of being first retained as engi-

neers—and then supplying machinery as a necessary corollary.

185. So we need merely to know the conditions under which engineering is charged, and we have a policy that can readily be explained, and sold. At Paragraph 137 we have the policy, namely, that the Company wishes to be paid for engineering whenever a Unit or a Plant is under consideration—not when a single machine is under consideration. This is simple, clear, and can be understood and sold upon that basis.

186. So we recommend that this policy be adopted. We shall come later to ways and means of selling Engineering as a separate and distinct commodity.[2]

COMMENTARY: Compensation for engineering service rendered to customers was the major question at issue in this case. The company's failure or inability to obtain full compensation for that service had resulted in a lessening of earnings. Nevertheless, it seemed to be imperative that the company should continue to offer to render the service. The designing and planning service seemed to be needed for sales promotion, and the erection service appeared to be required in order to assure satisfactory performance of the company's machines and thereby to protect the reputation of the company. The task, therefore, was to reconcile the customers' needs for engineering service with the company's obligation to maintain its earnings.

The first question to be considered was whether the company should have treated the cost of its engineering service as a general sales promotion expense. If the service had been required by all customers, or if each new customer for whom such service was rendered had made continuous repeat purchases, the company might have been warranted in treating the cost of engineering service as a general sales promotion expense. Such was not the case, however; the service was not rendered to all customers. In fact, a large number of customers bought only individual machines and required little or no designing and planning service or erection service. The purchases of customers requiring little or no sales engineering service constituted approximately two-thirds of the company's sales. Among those customers who did call for designing and planning service, the amount of service varied substantially between customers and bore no direct relation to the size of the orders. Hence it would have been unfair to many customers and a handicap to the company to have treated its sales engineering cost as a general item of expense, to be included uniformly in the cost figures from which prices were determined.

The company's method of accounting for its sales engineering expense and receipts was unsound. The company had charged the cost

[2] From the Analysis and Plan prepared by the University Staff, a division of the University Press, Cambridge, Massachusetts.

of the service into sales overhead and had credited the receipts to profits. The effect of this procedure was to inflate its cost figures. The receipts from customers for engineering service should have been credited to the account to which the costs of the service were debited.

The company's method of accounting for its sales engineering expense, furthermore, was unsound in another respect, for it failed to provide for proper incidence of the cost. Whether or not a separate charge was made for the sales engineering service, the fact was that the expense was incurred for about one-third of the machines, namely, those sold in groups. The net expense for sales engineering therefore should have been charged against the sales of groups of machines. If customers who bought single machines contributed to the payment of the cost of the engineering service, they were paying for something that they did not receive. If the company increased the general level of its prices on single machines to cover this overhead charge, it was handicapping itself in competition.

If the cost of engineering service had been properly allocated to the products for which it was incurred, the answer to the company's problem would have been indicated at an earlier date. The net cost of the designing and planning service and of the erection service was normally $42,000 a year. That sum amounted to approximately 18% of the normal annual sales of groups of machines, the products for which the expense chiefly was incurred. To have attempted to increase the price of machines sold in groups over the price of the individual machines by any such amount would have been obviously impractical. This leads inevitably to the conclusion that the company should have levied a separate charge for sales engineering service and have rendered the service only when a customer agreed to pay for it. The recommendations of the company's marketing counsel regarding methods of inducing customers to utilize this service on a straight commercial basis were sound.

The practice which the company had been following of collecting for sales engineering service where it could, directly or indirectly, and not collecting from other customers constituted preferential treatment and was tantamount to a varying price policy. The company was vitally interested in the proper selection of machinery adapted to the specific uses to which it was to be put and in the proper installation of the machinery in order to assure satisfactory performance. Nevertheless, the variations in the service requirements of different customers demanded a levying of charges commensurate with the service rendered in each case, and it properly was the task of the company's advertising and sales organization to make plain to prospective customers the reasonableness and justice of such a policy.

March, 1928 M. T. C.

Tasman Gauge Company[1] (B)

MANUFACTURER—DIAL GAUGES

Sales Promotion—*Engineering Service Provided for Customers.* In order to increase sales and to provide for better utilization of factory equipment, the company, a manufacturer of dial gauges, decided to provide free engineering service for customers and prospective customers by developing new applications for the gauges and by designing and manufacturing the mountings. After advertising this service in trade papers and by means of circulars for several months, the company was satisfied with the interest shown by customers and planned to advertise the service more extensively.

(1926)

In the autumn of 1926, the question of providing engineering service for customers and prospective customers was raised by executives of the Tasman Gauge Company. That company manufactured a high-grade line of micrometer dial gauges for use in testing the accuracy of finished parts or of goods in process in respect to thickness, flatness, height, depth, or concentricity. The gauge dials were graduated to register variations from standard in terms of 1/1,000 or 1/10,000 of an inch. The gauges ranged in price from $10 to $30 each. Almost all manufacturers producing in quantity materials or parts which had to be held within narrow limits of variation from standard measurements were potential users of Tasman gauges. Rubber,cloth, paper, felt, elastic, tubing, glass, sheet metal, and wire commonly were tested by means of the gauges. Around lathes, milling machines, planers, shapers, drill presses, and in tool rooms there were almost unlimited uses for the gauges.

Where micrometer dial gauges were not used, such instruments as plug gauges and ring gauges were used. Those instruments were slower for some operations and were stated to be less accurate than were dial gauges. It was claimed that the readings of the dial gauges were not subject to influence by the operators, whereas with plug, ring, and similar gauges the operators to some extent could determine results. The dial gauges, furthermore, unlike plug and ring gauges, not only showed when an item deviated from standard but also the amount of the deviation.

[1] Fictitious name. See also Tasman Gauge Company (A), page 61.

Each ring or plug gauge, moreover, could be used for only one measurement of a single material or part, whereas a dial gauge, with suitable mountings, could be used for various measurements on a wide variety of parts and materials.

In small cities and in territories where customers were scattered, the company sold its gauges directly from the factory or through supply firms without exclusive territorial rights. In the larger cities in the eastern and north-central part of the United States, however, the company granted exclusive territories to selected supply firms. Those firms, in addition to the gauges, sold such items as twist drills, machine screws, and rivets. The distributors' discount was 25% from list. The company made about 50% of its sales through its exclusive distributors, about 15% through supply firms without exclusive territories, and about 35% directly to users or to manufacturers of machinery who resold the gauges as standard equipment for their machines. Sales to such manufacturers, both directly and through supply firms, comprised between 5% and 10% of the company's total sales of the gauges. Manufacturers who purchased the gauges for resale usually bought in lots of 25 or 50, sometimes in lots of 100. On these sales the company allowed a special discount of 10%: that is, the list price to those customers was 10% below the list price to users. The exclusive distributors commonly ordered from $1,000 to $5,000 worth of the gauges at a time. Users customarily bought only one or two gauges at a time.

Until 1923 the company had not granted any exclusive territories and had made no effort to select distributors for its gauges. The result had been that in the larger markets prices were cut to a point where distributors made little or no profit and consequently were not interested in stocking, selling, or servicing the line. Beginning in 1923 the company had granted exclusive territories to selected supply firms in the larger cities. Each exclusive distributor was required to maintain a stock of gauges and repair parts amounting in value from $1,000 to $5,000, the amount depending upon the sales volume obtained in the territory. The company agreed to buy back from the distributors at list prices any Tasman gauges they had on hand were the exclusive agreements terminated at any time. The company, however, never had been called upon to do this. The company employed no salesmen. One of the executives visited each exclusive distribu-

tor once every six or eight weeks. The executives also visited large customers from time to time.

The exclusive distributors provided repair service for Tasman gauges, usually through arrangements with local jewelers. Repair service also was provided at the factory. A charge was made for this service based on the time required for the work. The company wished to have small orders for repair parts handled through its distributors in so far as possible. A careful study of costs had shown the company that the average cost of handling each order, regardless of the amount involved, was $1.65. The company would accept orders for any amount, however, and filled many small orders at a loss.

In addition to these gauges, the company manufactured special gauges for the automobile trade, and also bench machinery. Total annual sales amounted to about $350,000. Total selling expense, exclusive of advertising, was $35,000 annually, and advertising expense was $25,000. The company deemed it necessary to advertise its products extensively both in trade papers and directly by mail. The amount of the total advertising appropriation devoted to any product depended in general upon the sales volume of that product; the company wished to keep its total advertising expense within 7% of total net sales. An advertising agency handled the details of the company's advertising.

Before the micrometer dial gauges which the company manufactured could be used, they had to be attached to mountings that would hold the parts or materials to be measured against the pointer which extended from the gauge head and which, in response to pressure, moved the indicator hands on the face of the gauge. The particular type of mounting required varied with the part or material which was to be measured. The company made a few standard mountings, but, prior to the autumn of 1926, most of its gauges had been sold unmounted. In this way, it was necessary for users to design their own mountings and to manufacture them themselves or have them manufactured elsewhere. The Tasman Gauge Company upon request occasionally had made special mountings for customers. It had discouraged requests for such work, however, on the grounds that the work interfered with regular production.

In the autumn of 1926, it was proposed that the Tasman Gauge Company, instead of waiting for manufacturers to discover new

applications for its gauges, to design suitable mountings, to have those mountings manufactured, and then to order the gauges, should itself develop new applications and design and manufacture the mountings.

The objects of the plan were to increase sales of gauges and to provide for better utilization of factory equipment. The factory was operating at about 75% of capacity, and with additional equipment production could be doubled or tripled. The company's equipment for the manufacture of bench machinery was suitable for use in making the special mountings. The same workmen and engineers, moreover, could be employed for that work. Sales of the company's gauges for the automotive trade were increasing satisfactorily, but sales of bench machinery had remained stationary for some time, and the company expected its sales of that machinery gradually to taper down. The company, moreover, wished to increase its gauge business rather than its bench machinery business. The market for bench machinery was limited; competition was keen; the rate of stock-turn was slow; and profits were small.

Not only could the proposed engineering service be expected to increase the company's sales of gauges by giving them a wider application, but it also could be expected, by providing the company with an added sales argument, to increase the company's proportion of the total gauge business. There was one competing firm which was particularly active. That competitor consistently undersold the Tasman Gauge Company by a slight margin. The gauges which it sold were made to its order and the executives of the Tasman Gauge Company were convinced that they were decidedly inferior in quality to Tasman instruments. The competitor had succeeded in entering the market recently and, in a few instances, had taken customers from the Tasman Gauge Company. Since the competitor was not equipped for production and had no engineering department, it was not in a position to design and manufacture special mountings for users.

Tentative plans for the proposed engineering service were as follows: In its trade paper and direct-mail advertising the company was to describe its engineering service and to state that its engineers would prepare designs of special mountings for any firm which submitted a sample of the material or part to be measured together with a statement of the limits of accuracy to

which the material or part was to be held. With the designs which its engineers prepared, the company would send to the prospective customer a price quotation on the mounting and a tentative delivery date. If the prospective customer, after seeing the designs, placed no order, no charge would be made for the service. On any sales which it made the company would expect to receive a net profit of at least 10% or 15%. On sales of mountings which would effect unusually large savings to users, the company expected that it would receive a much larger profit. When special mountings were designed for one manufacturer of a particular product, the same mountings would be offered to other manufacturers of that product, whether or not the first manufacturer placed an order. The company was of the opinion that many of the parts for the mountings could be standardized. This would facilitate production and delivery and reduce costs.

All inquiries concerning special mountings were to be handled centrally. The company's exclusive distributors would receive commissions on all gauges sold in their territories, but not commissions on sales of special mountings in their territories.

The Tasman Gauge Company decided to offer engineering service as proposed. It regarded this step as an experiment and planned to discontinue the service if the expense became excessive or if the service failed to achieve its objects.

As planned, the company, during the winter and spring of 1926 and 1927, advertised its engineering service in trade papers and by means of circulars. The company was careful to avoid heavy advertising of the service at first, since it wished to enter upon the new work gradually. Numerous inquiries were received as a result of the advertising. A company manufacturing steel pens, for instance, sent a pen to the Tasman Gauge Company together with an explanation of the parts to be measured and the limits of accuracy required. In response to this inquiry, the Tasman Gauge Company prepared sketches and submitted a price quotation. Another inquiry of a similar nature was received from a manufacturer of pipe unions.

The company's exclusive distributor for New England, who was an engineer, became much interested in the company's new service. He visited the factories of several large manufacturers for the purpose of discovering places where gauges could replace slower and less accurate methods of measurement. The manufac-

turers apparently were glad to cooperate with the engineer in this work. In one automobile factory the engineer found 15 new applications for gauges. He designed the mountings for these applications and submitted them to the manufacturer. The company's price quotation for the 15 mountings was $3,000. The automobile company had not placed an order by July, 1927, but the Tasman Gauge Company anticipated that one would be placed, inasmuch as use of the gauges would effect substantial savings for the manufacturer. The engineer was paid a commission on sales of mountings which he had designed.

In July, 1927, the company was satisfied with the interest that had been shown in its service and planned to begin to advertise the service more extensively. The company had a list of 8,500 prospective customers. To these prospective customers the company proposed to send a four-page booklet featuring a special application of Tasman gauges in some well-known factory. Enclosed in the booklet was to be a blank form, to be filled out by the recipient, calling for information regarding some particular application of Tasman gauges. Prospective customers would be urged to fill in this form and return it to the Tasman Gauge Company. Answers received would be followed up by letters. The company planned to circularize this list of prospective customers once each month.

The company also planned to prepare a catalog of engineers' drawings of gauges and special mountings. The mountings would be described briefly in terms expected to appeal to engineers, and a statement of the particular plants in which the mountings were used would be included. The company anticipated that this catalog would replace the existing type of catalog containing fewer technical descriptions and pictorial illustrations. The company would provide its distributors with copies of this catalog.

The company also contemplated securing a new exclusive distributor for New England and making the former distributor a free lance for securing orders for special mountings. He would be free to work in any territory, and the company proposed to pay him a commission on all orders which it received for special mountings, regardless of whether or not they were secured directly by his efforts. Under this arrangement, the engineer probably would spend most of his time visiting factories to discover new applications for the company's gauges.

The Tasman Gauge Company recognized that it was possible that potential customers for whom the company prepared designs would make use of the designs without buying them from the company, either making up the mountings themselves or having them made elsewhere. The company, however, did not believe this risk to be serious. The question had been raised as to whether the company, at the request of a manufacturer for whom it had prepared special mountings, should agree not to sell the same mountings to other manufacturers. The executives were inclined to deem such a policy impracticable.

COMMENTARY: In this instance, engineering service was offered for a merchandising purpose—to ascertain how the company's products could be rendered more readily salable and where the company's line of products could be augmented to advantage. The market for the gauges which the company manufactured comprised such a diversity of industries that the task of learning what types of mountings were needed was complicated and formidable. By offering free engineering and designing service, the company not only stimulated an interest in its gauges among potential users but began to obtain information that could be utilized for developing a regular line of mountings. The company properly maintained an experimental attitude in inaugurating its technical sales service.

The company's earlier decision to use a system of selected distribution by granting exclusive franchises to selected distributors also is significant. For a product of this type it was logical that careful salesmanship, maintenance of adequate stocks for selection, and provision of satisfactory repair service should be of greater influence than price reductions in stimulating sales. Consequently a system of exclusive franchises was suitable and would be a success so long as the distributors rendered these services to the best of their ability.

July, 1927 M. T. C.

J. P. Shaftesbury Company[1] (B)

MANUFACTURER—PACKAGING MACHINERY

Sales Promotion—*Technical Sales Service Provided for Customers.* The company, which manufactured packaging machinery, offered to customers technical sales service, not only in connection with the use of its machines, but also in connection with the designing and selection of packages, since, unless the packages were satisfactory, users might become dissatisfied with the machines. Prospective customers, however, seldom asked the company for help with their packaging problems. The company decided, through the medium of a monthly bulletin, to solicit the cooperation of advertising agencies and carton manufacturers in getting prospective customers to make use of its service. Little response was received to this bulletin, and after six issues it was discontinued.

Advertising—*To Promote Use of Technical Sales Service.* The company, which manufactured packaging machinery, offered to customers technical sales service, not only in connection with the use of its machines, but also in connection with the designing and selection of packages. To encourage prospective machinery customers to bring their packaging problems to the company, it was proposed that the company should advertise the service in trade papers and directly by mail. The company decided not to advertise the service in trade papers but to increase the direct-mail advertising.

(1925-1927)

The J. P. Shaftesbury Company, which manufactured automatic and semiautomatic packaging machinery, was prepared to extend to actual and prospective customers technical assistance, not only in the installation and operation of its machines, but also in the designing and selection of packages. The sales organization of the company was especially trained to assist customers to select packages which were adapted to use with automatic packaging machinery and which were economical to use, not only from the point of view of the packaging machinery required, but also from the point of view of shipping requirements and of material needed for the packages. Having developed a sales force qualified to assist customers in this way, the company wished to realize as much sales advantage as possible from the service. The sales manager stated that the company's competitors had not undertaken to provide service of this kind; they, as a rule, merely

[1] Fictitious name. See also J. P. Shaftesbury Company (A), page 259.

advised customers as to the type of machinery suitable for use with the packages which the customers had selected.

It was the company's experience that customers who had been enabled to realize material savings in packaging costs by means of the company's advice and assistance almost always returned to the company when they needed additional packaging machinery. As a rule, however, prospective customers did not seek the company's assistance in regard to the selection of containers. Ordinarily they submitted samples of the containers they planned to use, together with samples of the material to be packaged, and asked for quotations on machinery to meet their requirements. The sales manager of the J. P. Shaftesbury Company stated that the packages ordinarily were selected by the sales departments of the customers, often in consultation with advertising agencies or carton manufacturers, and frequently with little reference to mechanical or manufacturing requirements.

As a means of familiarizing users and prospective users of packaging machinery with the company's service, and of encouraging them to make use of that service, it was proposed, in 1925, that the company solicit the cooperation of advertising agencies and of manufacturers of cartons. It also was suggested that the company should advertise its service in trade papers and, to a greater extent than it previously had done, directly by mail.

The automatic and semiautomatic machines which the J. P. Shaftesbury Company manufactured performed the group of operations incident to packaging materials in cardboard boxes, cartons, bags, or cans, and included machines for lining, filling, weighing, and sealing the packages. The company also made machines for folding pieces of cardboard, cut to the proper shapes, to form boxes and cartons. In general, each machine performed only one operation but could be adjusted for use with various types and sizes of containers and with various materials. By making the basic parts of each type of machine standard and interchangeable, the company was able to manufacture the machines for stock, while making to order the comparatively simple equipment which rendered them adjustable for a variety of uses.

The company's machines were used for packaging such varied materials as baking powder, cleaning powders, arsenate of lead, sugar, dental powder, drugs, insecticides, malted milk, pie filling, powdered bluing, tea, coffee, toilet soaps and powders, and shoe

eyelets. Approximately 40 different industries were using Shaftesbury machines. The total number of potential users was small, however, since only those firms which packaged goods in large quantities could make economical use of automatic packaging machinery. Single machines ranged in price from $250 to $3,750, the average price being $2,500. Inasmuch as the operations performed by the company's different machines in many instances supplemented each other, each customer ordinarily required several of them; for instance, a machine to form cartons, a filling machine, and a sealing machine.

The life of the company's machinery was long, from 10 to 25 years, so that orders for replacements were few. Repeat orders in general depended upon the expansion of the customers' business, so that the interval between an initial and a repeat order tended to be long. The company had been in operation for over 20 years, however, and ordinarily at least half of its sales were repeat sales.

The company's selling terms were f.o.b. factory, 30 days net from date of purchase, with quantity discounts for large purchases. On all its machinery the company allowed a 30-day free trial. Freight was paid by the customer making the trial, but the expense of installation was borne by the company. No installation was made unless the company was convinced that the prospective customer could use the machinery effectively, and removal of machines after installation was infrequent.

Occasionally the company leased machinery to a customer. The lease was for three years at an annual rental amounting to 20% of the selling price of the machinery. At the end of three years the customer had the option of returning the machine or of buying it. If he decided to purchase, the amount of the rental paid was applied against the sale price and interest of 6% was charged on the unpaid balance. The company was opposed to the lease system and discouraged leasing on the part of its customers.

The company employed two installation engineers, who not only supervised the installation of the machines but also instructed employees in the customers' organizations as to the operation of the machines. Intelligent adjustment and use of the machines was essential to smooth and continuous operation. All repair work on the machinery was handled centrally. Sale of repair parts was a small part of the total business.

The company advertised in a few trade papers and trade directories. Most of the trade paper advertisements did not occupy more than a quarter of a page. As it had become better known, the company had followed a policy of decreasing the size of its advertisements and increasing the number of papers used. The advertising was for two purposes: to familiarize potential customers with the company's name, and to secure inquiries. A typical advertisement showed a picture of one of the company's machines, stated that labor and material could be saved through use of the machine, and urged readers to write for further information. In some instances it was suggested that readers submit samples of the containers they were using. The special technical assistance which the company was prepared to give customers seldom was referred to in these advertisements.

The company also did some direct-mail advertising. This circularization was not done regularly, but whenever, in the company's opinion, it needed to be done. In its circulars, as well as in follow-up sales letters which it sent out, the company described its technical sales service. In one circular, for instance, the following statements, with appropriate illustrations, appeared:

> S-E-R-V-I-C-E is not a mere word to a Shaftesbury Sales Engineer—it is a potent fact to be demonstrated. He is in a peculiarly advantageous position to make recommendations for your benefit, and free from the suspicion of having a selfish motive. This is because the Shaftesbury line includes many optional units —the cost of operating and maintaining which, for long periods under practical factory conditions, have been surveyed by a disinterested engineering organization.
>
> Our Engineer helps you to apply these comparisons to the efficient and economical solution of your own problems—but his interest does not stop there. For example—if you were considering the adoption of a carton (now used for a popular coffee brand) such as shown in front, side and end elevation in the upper left hand corner on the following page, he could suggest that you change the dimensions by mere fractions of an inch to either one of the two cartons shown in the same column. In one case you would save 8.74 square inches on board and in the other you would save 9.89 square inches per carton. You could make either of these savings without any change in the capacity of the package, or in the standard style of flat blank such as shown in the upper right hand column in the chart of the following page.

The company employed four salesmen, and the sales manager also was active in selling. One of the company's salesmen had

his headquarters in Chicago, one in Cleveland, one in New York City, and one in Oakland. These men had had long experience in selling the company's products, and they were allowed freedom in planning their visits and in caring for the company's interests in their territories. They kept the general sales manager informed of their activities and of prospective customers which they had located. The sales manager, in turn, referred inquiries received at the central office to the salesmen in whose territories they originated. Orders for the company's machinery usually originated with the production managers or chief engineers in the purchasers' organizations. Ordinarily, a long period of negotiation preceded purchase. When a salesman or the sales manager had obtained from a prospective customer a sample of the container which he was using or intended to use, the salesman or sales manager studied the container in order to determine whether it was of the type, shape, and size which would be most economical and satisfactory for the prospective customer to use. If means of improving the container were discovered, the prospective customer was told of them.

A firm which packed coffee by hand in pound and half-pound paper bags, for instance, wished to install automatic packaging machinery. The J. P. Shaftesbury Company had machines for filling paper bags, but the sales manager was of the opinion that cardboard cartons were more satisfactory for coffee than were paper bags. He therefore planned pound and half-pound cartons for the prospective customer, making them of such dimensions that only one size of shipping case was needed for the two sizes of packages, whereas previously several sizes of shipping containers had been required. The coffee manufacturer was pleased with the sales manager's plans for the cartons and purchased machinery for forming the cartons, for lining them, for filling and weighing them, and for sealing the tops of the packages.

In another instance, a company selling arsenate of lead wished to use automatic packaging machinery so that employees would not have to stand in the dust raised from the powdered material while it was being packed. This company was using paper bags so formed that they would not stand alone when empty, which was necessary if they were to be filled automatically without the presence of an operator. The salesman of the J. P. Shaftesbury Company suggested that a different type of bag should be used.

The manufacturer, however, was unwilling to make a change. The salesman finally solved the difficulty by designing a metal container which would hold such a paper bag as the manufacturer used upright while it was being filled. Metal containers such as the salesman designed could be run on a conveyor to the filling machine, so that the operator who was to place the bags in the containers could stand at a distance from the machine. Only a small number of the containers would be needed, since they could be emptied rapidly and used again.

A wholesale grocery company, in another instance, made an inquiry concerning a machine for packing coffee. A salesman of the J. P. Shaftesbury Company visited the wholesaler's plant. It was evident that the volume of coffee packed by the wholesale firm would not enable it to make economical use of an automatic packaging machine. The salesman observed, however, that in the room next to that in which the coffee was packed, pulverized sugar was being put up in cartons. The salesman planned a conveyor arrangement whereby the same packaging machine could be used conveniently for both coffee and sugar.

The salesmen and the sales manager constantly were observing packaged goods in stores and elsewhere with a view to discovering how the packages might be improved. Well thought out suggestions for improvements sometimes served as the basis for a sales visit by Shaftesbury salesmen. The sales manager, for instance, observed that in the sets of manicuring accessories sold by a large manufacturer of toilet articles there were cakes of nail polish put up in small two-piece boxes, like match boxes, which could not be opened without being removed from the larger boxes holding the full set of articles. It was apparent to the sales manager that the small box would be more convenient for users if it were made in one piece with a folding top that could be lifted up, so that the box could be opened without first being removed from the larger box holding the full set of accessories. The sales manager presented his conclusions to the president of the company making the manicure sets. As a result, that company decided to change to the style of box recommended by the sales manager and to purchase Shaftesbury machinery for forming the one-piece, folding top boxes. Previously the manufacturer had been buying the two-piece boxes ready made. An independent firm of engineers reported that the manufacturer of

the manicure accessories realized an annual saving of $30,000 through the change made in the boxes at the recommendation of the sales manager of the J. P. Shaftesbury Company.

Inasmuch as the number of potential customers for automatic packaging machinery was small, it was important for the company to secure the repeat business of users of its machinery. In the sales manager's opinion, the goodwill which customers felt for the company because of the assistance which it gave them in their packaging problems was invaluable in securing repeat orders.

The sales manager, however, believed that the company's technical sales service also should be effective in securing new customers. It was with this in view that he proposed to solicit the cooperation of advertising agencies and carton manufacturers. He was of the opinion that these organizations, when undertaking to advise customers as to suitable packages for their merchandise, would welcome assistance from a firm which, like the J. P. Shaftesbury Company, was qualified to make recommendations from a manufacturing point of view. The sales manager's plan provided for the development of a monthly bulletin to be distributed to a selected list of 700 or 800 advertising agents and carton manufacturers. In this bulletin the company's service would be described and actual cases cited. The company would express its willingness to consult with the readers and their customers in regard to the selection of containers, pointing out the importance of having containers planned with reference to manufacturing requirements.

The company decided to issue the bulletin as proposed. Care was taken to have the statements in the bulletin dignified and concrete. For six months the bulletin was issued with practically no response from the persons to whom it was sent and, at the end of that time, the bulletin was discontinued.

The company deemed it impracticable to advertise its technical sales service in trade papers. In the sales manager's opinion, special services were advertised so frequently, often by firms which in reality were not prepared to give any services of value, that readers did not assign much importance to such announcements. Direct-mail circulars the sales manager regarded as a more satisfactory medium for informing potential users of the company's special service, and he expected to increase the amount of circularization done.

COMMENTARY: The company's decision to discontinue circulation of the bulletin to advertising agents and carton manufacturers was warranted. The period during which the bulletin was issued was long enough to furnish a test, and the response was too discouraging to justify continuance of the experiment.

The company's decision against advertising its technical service in trade papers does not have so strong support as its decision to discontinue the bulletin to advertising agents and carton manufacturers. It is possible, of course, that the company's products were of a type which could be used to advantage only by such a small percentage of the readers of any particular trade paper that that form of advertising involved a large amount of waste circulation for this particular company. The reason given for the decision, however, that advertisements of technical sales service in trade papers are not accepted as credible by readers, could be at least partially controverted by the experience of companies in other industries which have advertised their technical sales services successfully in trade papers. The opinion expressed by this company, nevertheless, probably is sufficiently widespread to warrant asking whether it is not opportune for the trade paper publishers to exercise more careful censorship on the statements regarding sales service appearing on their advertising pages. So long as there are doubts in the minds of any appreciable number of readers regarding the truth and sincerity of statements made in any advertisements in trade papers, all industrial advertising suffers.

Irrespective of the question of the credibility of advertisements in trade papers, however, the market to which the J. P. Shaftesbury Company was catering was so narrowly defined as to be clearly suited to the use of direct-mail circularizing for at least a part of its advertising.

The aspect of this case of most general significance is the illustration which it affords of circumstances under which technical sales service can be offered advantageously. The company's machinery clearly was suited to marketing on a performance basis rather than on a price basis. It was essential that potential purchasers should be convinced that the machinery would perform satisfactory service. Although at least one-half the sales were on repeat orders, the capacity and life of the machines was such that the company needed to secure a substantial volume of orders from new customers each year. Each of the potential customers had special problems relating to the use of such machinery as was manufactured by the J. P. Shaftesbury Company. In order to secure their initial orders, it was necessary that they be assured that their special problems would be met. In order, furthermore, to obtain repeat orders, it was essential that customers be permanently satisfied not only with the actual performance of the machines which they bought but also with the use which they were making of pack-

ages. Hence, technical sales service such as that offered by the J. P. Shaftesbury Company was well advised.

The fact that each machine or battery of machines constituted a unit sale of substantial amount rendered the offering of technical sales service more economical for the company than it would have been in the case of a company with materially smaller unit sales. Inasmuch as the cost of installation was borne by the J. P. Shaftesbury Company and a period of 30 days' free trial allowed, furthermore, the study of the problems of each customer and the instruction of their operators constituted insurance against the incurring of heavy losses on rejected installations. To effect a sale, finally, prolonged negotiations had to be conducted. The analysis of a prospective customer's needs furnished facts which were essential for the intelligent and effective conduct of such negotiations. Thus, this case furnishes an especially clear-cut example of circumstances calling for technical sales service.

September, 1927 M. T. C.

Waynax Machinery Company[1]

MANUFACTURER—WELDING AND CUTTING EQUIPMENT

Sales Promotion—*Selection of Methods.* The company, a manufacturer of portable welding and cutting outfits, wished to increase its sales volume, which, during the preceding seven years, when the company had done no sales promotion work, had declined materially. The company was uncertain whether to attempt to promote sales by trade paper advertising, by direct-mail advertising, by personal solicitation by salesmen, or by price reductions.

Sales Promotion—*Financing through Borrowed Funds—(Commentary).* The company, a manufacturer of portable welding and cutting outfits, wished to increase its sales. Its plant was capable of increased production and the product was adapted to aggressive methods of sales promotion, but the company had only limited capital available for such work. The commentator's opinion is that such a company is justified in borrowing additional working capital to carry out a program of sales promotion and that in this case capital for such activities was as necessary as for the financing of production.

(1927)

The original owner of the Waynax Machinery Company died in 1920. During the following seven years the company continued in operation, but litigation which was in process relative to the disposition of the property made active sales promotion impossible. Sales in that period declined from more than $100,000 annually to $15,000 in 1926. By October, 1927, however, all legal difficulties had been settled and the new owner wished to take steps to increase the company's sales volume. The company owed no money. Working capital available for sales promotion was limited to a few thousand dollars.

The Waynax Machinery Company manufactured portable welding and cutting outfits for use with acetylene or with city gas and oxygen. The outfits included regulators for determining pressure, dial gauges for indicating pressure, and torches for cutting and welding. The company did not manufacture the dial gauges. The outfits ranged in price from $20 each to $100 each. The torches and the regulators could be purchased separately; often several torches were required with a single outfit. The life of the outfits was long but repairs were needed frequently, usually be-

[1] Fictitious name.

cause of careless or improper handling, the owner of the company stated.

Waynax outfits were made both for large and small work. They could be used for work on jewelry and for cutting and welding heavy steel beams. There were innumerable uses for them in manufacturing plants in which metals were used, in machine shops, in mills, and in automoblie repair shops and battery stations. Telephone companies and firms manufacturing automobile bodies were large users. Automobile repair shops and battery stations normally did not use more than one outfit. Large manufacturing companies, on the other hand, often used a dozen or more outfits.

Shortly before his death the original owner of the company had perfected and patented a regulator that incorporated features which, in the company's opinion, made it distinctly superior to regulators sold with competing welding and cutting outfits. No concerted effort had been made to popularize this regulator. The new owner stated, however, that whenever a regulator of the improved type had been used the results had been highly satisfactory to the user and additional orders commonly had been placed, either by the user or by persons who had seen the regulator in the user's plant. In 1922 the company had advertised its improved regulators for three months in the *Engineering News Record,* at a total cost of $210. This advertising had resulted directly in sales of more than $2,000. The Waynax Machinery Company sold its improved regulators to competing manufacturers of cutting and welding equipment as well as to users. There were several large competitors who were actively promoting sales of their products by means of salesmen and advertising.

The three months' advertising in the *Engineering News Record* was the only advertising which the Waynax Machinery Company had done after 1920. Prior to 1920 the company had advertised in trade papers; no salesmen had been employed, although the owner occasionally had visited large users. The orders which the company had received from 1920 to 1927 had resulted, in the main, from this earlier advertising and from the satisfaction which the outfits gave in use.

The company's factory was well equipped and, without additions, could increase production to allow for annual sales of $75,000. Many of the factory employees, moreover, had been

with the company prior to the death of the original owner, so that the company expected no production difficulties.

With one exception the company sold its cutting and welding outfits directly to users rather than to distributors. For several years the company had sold to a firm which resold to automobile repair shops and battery stations. This firm did not have an exclusive agency, and the company also sold directly in those markets.

The company, in 1927, was uncertain whether to attempt to stimulate sales by trade paper advertising, by direct-mail advertising, by personal solicitation by salesmen, or by price reductions. The company's prices were higher than those of some competitors and lower than those of others. The owner stated that the company could reduce its prices below the level of all competing prices and still secure a satisfactory gross margin.

If the company employed salesmen, it planned to pay them on a commission basis. The commission tentatively considered was 35% of sales. The salesmen would be expected to call on large users. It would be necessary for them to be able to explain the merits of the company's outfits as compared with competing outfits. In no event did the company intend to employ salesmen to call on automobile repair shops and battery service stations. Such equipment as it manufactured was in general use in those markets, but each repair shop and battery station seldom needed more than one cutting and welding outfit, and, in the company's opinion, it often was difficult to make collections from those users.

Prior to 1920 the company had undertaken, through its advertising in trade papers, to sell nationally. The new owner, in 1927, thought that it might be more satisfactory to concentrate sales efforts upon a limited territory. In that case, salesmen and direct-mail advertising would be used.

COMMENTARY: Here is the case of a company which apparently had meritorious products, including a patented accessory, but which had no sales organization and no marketing plan. The company had a well equipped plant that was being only partially utilized, and it had a supply of well-trained workmen; but it lacked funds for executing a broad program of sales promotion.

The company had advertised for only three months and in only one publication during a period of seven years. It employed no salesmen. In other words, it was relying upon its products to sell themselves in

a competitive market. The company was selling its patented regulator to competitors for equipping their cutting and welding machines. That part of its market very likely could not be held after the patent expired, even if the company was fortunate enough not to have keener competition with its regulator arise during the life of the patent. The company therefore was not building securely for the future or guarding adequately against displacement of a portion of its market.

Three major questions are raised by these statements of facts. First, would the company's products be responsive to aggressive methods of sales promotion? Second, were such methods of sales promotion needed? Third, could a plan for active sales promotion be financed?

The answer to the first question is fairly clear. The fact that the company's sales were made almost entirely to users who placed orders of their own accord indicates that the machines had merits which differentiated them from other makes of machines. The patent regulator was believed to be superior to other types of regulators. This regulator, it appears to a layman, could have been used as a powerful lever in promoting the sales of the company's cutting and welding machines if the use of the regulator had been confined to the company's own products, instead of being sold for use with competing products. The frequency of repairs necessitated by carelessness and improper handling by users suggests an opportunity for educational sales work that would have built goodwill. Finally, the results shown by the three months' advertising in 1922 gave definite evidence of the responsiveness of the market. In the light of these facts the conclusion is inescapable that the company's products were of a sort to which sales promotion efforts could have been applied successfully.

The need for the use of aggressive sales methods already has been indicated, when it was pointed out that the company was not adequately safeguarding its market. There were several other manufacturers of cutting and welding equipment, furthermore, who were actively seeking to secure recognition of their products by users. The more progress those manufacturers made in strengthening their hold on the market, the less likely it was that the Waynax Machinery Company, with no aggressive sales program, could hold permanently even its meager share of the market. Hence, the company's products not only were suited to the use of aggressive sales methods; they demanded such methods.

In order to avoid assuming too great a financial burden, the company probably should have begun its sales development program by concentrating its efforts on a limited geographical area or on a few selected industries, expanding as rapidly as experience and financial resources warranted. To carry out such a program it probably would have been necessary to secure additional working capital from outside sources, but that should have presented no serious difficulties. The

company had a strong case on which to seek to obtain funds. Its sales opportunities made it a good credit risk. This additional working capital, to permit the employment of several salesmen and to make possible the carrying out of a continuous advertising program, was just as necessary as the use of capital to finance production, and reasonably could be expected to yield profitable returns.

November, 1927 M. T. C.

Sheridan Chemicals Company[1]

MANUFACTURER—INDUSTRIAL CHEMICALS

Trade Name—*Use of Distinctive Brand Names as Competitive Advantage.* The company, which manufactured a complete line of industrial chemicals, contemplated selling its products under distinctive brand names, in order to raise them out of the class of competing products. Such a brand name already had been applied to one of the products; competitors had in several instances applied distinctive names to certain other items which the company also manufactured and sold under their ordinary commercial names.

(1926)

The Sheridan Chemicals Company manufactured a complete line of industrial chemicals and was one of the largest chemical companies in New England, having annual sales of more than $3,000,000. In the company's line there were more than 60 items, many of which were made in a variety of strengths. Among the products were: acetic acid; ammonia alum; ammonia anhydrous; ammonia aqua; arsenate of soda; battery acid; bisulphate of soda; brimstone; calcium chloride; carbonizer; chloride of alumina; chloride of zinc; depilatory; Glauber's salt; hypochlorite of soda; oil of vitriol; muriatic acid; nitric acid; hydrate of alumina; sulphate of ammonia; dyestuff intermediates; and sulphuric acid. The base product was sulphuric acid. With the exception of the hypochlorite of soda and an acid-proof paint that the company manufactured, none of the products were sold under distinctive brand names. Late in 1926, however, the executives were discussing the advisability of developing a brand name or brand names for some of the other products.

The Sheridan Chemicals Company sold its products directly to large industrial users and also to wholesalers and mill supply firms. Inasmuch as freight charges represented a substantial item of cost in the delivered product, the company was unable to compete in areas outside of New England with companies located in those areas and, hence, confined its distribution to New England. In its own territory the company had several important competitors whose products were in general equal to Sheridan products. Industrial chemicals were highly standardized, and it was difficult

[1] Fictitious name.

for one manufacturer to secure an advantage in quality over another manufacturer. This meant that price was an important factor in selling. Large users often purchased chemicals under yearly contracts; in such instances bids were asked for and the contracts were awarded to the firm offering the lowest prices.

Some of the most important markets for the company's products were among textile mills, tanneries, paper mills, artificial ice and refrigeration plants, dye and chemical works, and steel and wire plants. Not all the chemicals, of course, were used by the same types of customers. The chief uses of some of the company's principal products, for instance, were as follows: *Oil of vitriol* (sulphuric acid)—acid manufacture, chemical manufacture, oil refining, pickling iron and steel, wool carbonizing, rubber recovery, tanning, dyeing, dyestuffs manufacture, and explosives manufacture. *Battery acid* (sulphuric acid)—used by battery service stations and storage battery manufacturers. *Nitric acid*—jewelry manufacture, metal manufacture, electroplating, photo-engraving, cotton printing, dyestuffs and intermediates manufacture, and explosives manufacture. *Muriatic acid* (hydrochloric acid)—sugar refining, gelatine manufacture, wire drawing, pickling iron and steel, electroplating, bleaching, dyeing, soap manufacture, leather manufacture, dyestuffs and intermediates manufacture, and for cleaning brick construction. *Acetic acid*—dyeing, silk scrooping, calico printing, tanning, rubber manufacture, jewelry manufacture, photo-engraving, artificial leather manufacture, varnishes and lacquers manufacture, pharmaceuticals manufacture, and manufacture of perfumes. *Sulphate of alumina* (aluminum sulphate)—paper sizing, water filtration, treatment of sewage and industrial wastes, dyeing, and tanning. *Hydrate of alumina* (aluminum hydroxide)—preparation of pure aluminum salts, manufacture of aluminum metal, ceramic industries, and dry color work. *Carbonizer* (aluminum chloride)—used almost exclusively for carbonizing wool, as piece goods, raw stock, or shoddy. *Glauber's salt* (sodium sulphate)—dyeing. *Depilatory*—wool pulling. *Ammonia anhydrous* (ammonia)—medium in refrigerating machines. *Sulphate of ammonia* (ammonia sulphate)—fireproofing textiles and paper, manufacture of scouring compounds, and as a fertilizer. The containers in which the products were delivered varied from bags and barrels to carboys, steel drums, tank cars, and tank trucks.

The company occasionally advertised its products in trade journals. It did not regard such advertising as particularly effective in stimulating sales, however, and most of its advertising was done directly by mail. The advertising program was flexible, but in general the company undertook to send out each month one piece of direct-mail advertising for some one product. This advertising matter was sent to all actual and potential customers for the product in the territory. In view of the close price competition on its products, the company stressed their reliability and the service it was prepared to render. The company was able to give prompt delivery, for instance. It also maintained a staff of expert chemists who would consult with and advise any customer as to his problems in the use of chemicals. Similar services, however, also were rendered by the company's competitors.

In all its advertising, and also upon the containers used for its products, the company displayed its name and address prominently, printed in ordinary type. In 1926 the company had adopted a registered trade-mark, and that mark thereafter also was used in the advertising and upon the containers. The trade-mark consisted of a colored oval in the center of which there was an appropriate design. No name was incorporated in the trade-mark, and the mark could not be used by customers in calling for Sheridan products.

In 1923 the company had begun to manufacture a hypochlorite of soda solution. This solution the company sold under the name "Tobol." Tobol was essentially no different from other hypochlorite of soda solutions on the market except that it was stated to be more stable than the ordinary industrial solution, losing its chlorine content less rapidly. The executives of the company were of the opinion that it was advantageous to market this product under an advertised brand name because the brand name tended to distinguish the company's product from competing products.

Tobol was originally developed as a bleaching agent and as such it was used by power laundries, textile mills, paper mills, and in the household. Later the company undertook to secure recognition for Tobol as a deodorant and disinfectant. In those capacities, Tobol was used by tanneries, fish plants, railroads, dairies, hospitals, and so forth. The company in its advertising usually referred to this product as "Tobol Bleach" or "Tobol Dis-

infectant," rather than simply as "Tobol," and followed the name with the slogan "A Sheridan Product."

The only other product which the company sold under a distinctive brand name was a paint which was resistant to the action of acids and which had been developed primarily for use in the company's own plants; the company made no effort to stimulate sale of the paint, which was called "Tobax." The name "Sheridan," however, usually was used directly in connection with the company's battery acid, its carbonizer, and its depilatory; that is, those items were listed as "Sheridan Battery Acid," "Sheridan Carbonizer," and "Sheridan Depilatory," respectively.

One of the company's competitors recently had placed on the market a product designed to be used as a substitute for acetic acid by textile mills in connection with the dyeing processes. This product, which was cheaper than acetic acid, had been given a distinctive name by the manufacturer. The product itself could not be patented, and the Sheridan Chemicals Company also had begun to manufacture it. The executives were uncertain whether to follow the competitor's example and give the product a brand name or to sell it under its customary commercial name.

In another instance, a large company manufacturing aluminum had begun to market a substitute for alum under a distinctive name. The Sheridan Chemicals Company also sold this product, which was used chiefly by filter plants. The advertising manager of the Sheridan Chemicals Company stated that, in his opinion, the use of the brand name had not proved of any special advantage to the aluminum company. The market for the product was strictly limited, and price was an important consideration in its purchase.

The executives of the Sheridan Chemicals Company were convinced that for certain of the products the use of a distinctive name clearly was inadvisable. One such product was sulphuric acid, which was so highly standardized that it practically was impossible for one manufacturer to offer a product in any essential way different from any other sulphuric acid on the market. One of the executives stated that any attempt to market sulphuric acid under another name would be regarded as a joke in the trade. Muriatic acid and nitric acid, in the company's opinion, were similar to sulphuric acid in this respect.

The executives, however, desired in so far as possible to raise

Sheridan products out of the group of competing products and thought that one means of doing this might be the use of advertised brand names. No decision had been reached as to which products, if any, should be given distinctive names or as to whether a different name should be used for each product or a new blanket trade-mark for all the products. The advertising manager stated that, in general, competitors did not brand their products. He was inclined to think that it would be inadvisable to use trade names which would disguise the nature of the products.

COMMENTARY: The company had four methods of identifying its products: (1) the registered trade-mark; (2) the company's name and address on all containers; (3) the use of the word "Sheridan" as part of the product name for several items; and (4) special names, such as Tobol, supplemented by the slogan "A Sheridan Product." The use of these various devices indicates that the products were of a sort that it was worth while to identify by means of a trade-mark. The question, then, is in regard to the manner of using these various identifying marks and possibly as to the advisability of increasing the number of marks.

The registered trade-mark was a blanket trade-mark. Since it was only a symbol, however, it served merely as a protective device. The symbol, to be sure, enabled a buyer to ascertain that the genuine article had been delivered to him; but since the symbol was not phrasable, it did not assist a customer directly in placing an order. When a user of chemicals placed an order with a wholesaler for Sheridan products, the trade-mark enabled him to make certain that he received what he ordered; but that was as far as the influence of the symbol extended.

The Sheridan name probably had more influence than the symbol as a trade-mark. The Sheridan name could have been protected against unfair trading, but as it was used it could not be registered and therefore did not enjoy complete protection against infringement. Had the Sheridan name been written in a distinctive manner or incorporated in a distinctive device, it could have been registered and would have served admirably as a blanket trade-mark when placed on containers, when used as part of a product name, or when used in the slogan "A Sheridan Product."

Inasmuch as dependability in quality was one of the chief buying motives for such chemicals as the Sheridan Chemicals Company produced, and since the same standards of quality were maintained on all the company's products, the use of a blanket trade-mark was desirable.

Since the Sheridan name was phrasable, it was more useful in marketing than the symbol which had been registered as a trade-mark. It appears to me, therefore, that the company could have simplified its trade-mark problem and secured greater protection by adopting the word Sheridan, written in a distinctive manner, as its primary trade-mark.

On the question of the use of special brand names on individual products, the decision in each instance depended on the characteristics of the product. For the hypochlorite of soda solution, which had a special characteristic in being more stable than other hypochlorite of soda solutions on the market, a special brand name was useful in individualizing the company's product. The same practice could well have been followed in giving special brand names to other products having distinctive characteristics. For the standardized articles, however, a blanket trade-mark embodying the company's name would secure all the results that could be obtained by the use of special brand names and would form the simplest method of identification.

January, 1927 M. T. C.

F. R. Priestly Company[1]

MANUFACTURER—STEEL BALLS

Trade Name—*Use of Distinctive Name as Competitive Advantage.* Price competition on steel balls such as the company manufactured for use in ball bearings was severe. To lift its product out of this direct price competition, it was proposed that the company should make certain improvements in its balls and sell them under a registered name.

(1928)

The F. R. Priestly Company manufactured steel balls for use in ball bearings. Its customers were manufacturers who used the balls in their products. Among the customers were bicycle manufacturers, manufacturers of roller skates, manufacturers of casters, manufacturers of windshield wipers and of other automobile accessories, makers of factory trucks, manufacturers of phonographs, makers of lathe chucks, and automobile manufacturers. Price competition on steel balls such as the company sold was becoming increasingly severe, and the company was forced to depend for its profits upon a large volume of sales at a narrow gross margin. In the early part of 1928, it was proposed that the company, in order to lift its product out of this direct price competition, should make certain improvements in its balls and then sell them under a registered trade name. It was not usual for steel balls to be sold under a trade name.

In several of the larger cities in the United States, the company was represented by manufacturers' agents with exclusive territories. These agents received a commission on all sales in their territories. About 20% of the company's sales were made through the agents. The remainder were made directly by mail, as the company employed no salesmen. The company was of the opinion that its product was suited to personal salesmanship. The gross margin on which the company was operating, however, was insufficient to warrant the use of traveling salesmen. There were only a few users of such steel balls as the company made in any one city, moreover, so that salesmen's traveling expenses would be high.

The company did a nominal amount of trade paper advertising

[1] Fictitious name.

but relied chiefly upon its direct-mail advertising. This advertising consisted of semiform letters, about 50 of which were sent out each day. The company also placed advertising material in its shipping cases. In its advertising the company stressed the dependability of its balls and their freedom from fire cracks, the quick delivery which it was prepared to make, and its attractive prices. The chief object of the advertising was to obtain inquiries. In an effort to distinguish its products from competing products the company had placed identification marks on the cases in which the balls were shipped and had called customers' attention to these marks in its advertising. This effort apparently had made little improvement in the company's marketing position.

The F. R. Priestly Company was of the opinion that its balls, because of the method used in their manufacture, were superior to other balls in the same price class. The general manager of sales explained that most manufacturers of steel balls used high carbon steel. This steel, in the process of being formed into balls, was subjected to terrific pressure. The balls then were heat-treated, to harden them, and were immediately dumped into cold water. This sudden and necessary change of temperature caused cracks, so-called fire cracks, to appear in a portion of the balls. The balls were inspected and those with visible fire cracks were rejected. Internal cracks, however, did not show up until the balls were in use, when, under the strain, the cracked balls would break apart.

The manufacturing process of the F. R. Priestly Company differed from this. Instead of using high carbon steel in the balls, the company used low carbon steel, which, of course, was much softer. After the steel had been formed into balls, the balls were placed in a carburizing furnace, where all except a small portion of the steel in the center of the balls was converted into high carbon steel. The small and relatively soft center served to absorb the strain to which the balls were subjected when taken from the heat-treating room and placed in cold water. Fire cracks consequently did not appear. The company, in fact, guaranteed its balls to be without fire cracks. The sales manager stated that manufacturers who once had experienced difficulty with fire cracks were willing to pay a higher price for balls guaranteed to be free from that defect.

In addition to this superiority in product, the F. R. Priestly

Company was able to give prompter delivery than was given by most of its competitors. The company had 150,000 pounds of finished balls on hand at all times. All the stocks were carried at the factory; it was impracticable to carry stocks at branch points since the balls were likely to rust and when that happened had to be refinished. The sales manager stated that the company's ability to make prompt delivery was well known to users.

Typical orders for balls, the sales manager stated, were for from 5,000,000 to 50,000,000 balls. It was customary for a firm each time it was in the market for steel balls to secure quotations from several manufacturers and to buy from the company quoting the lowest price, regardless of the source of previous purchases of balls and their satisfactoriness. The sales manager of the F. R. Priestly Company said in January, 1928, that price competition among ball manufacturers had been increasing seriously in the last six months. There were, he explained, a large number of small manufacturers making steel balls. In many instances, those manufacturers, he stated, had nothing to offer customers except low price; their products were not superior nor were they able to give exceptional service. The competition of these small manufacturers was making it increasingly difficult for the larger manufacturers to maintain the quality of their products and to support adequate sales and service organizations.

To the sales manager of the F. R. Priestly Company it appeared that the company's difficulty lay in the lack of "personality" in its product. One steel ball looked very much like any other steel ball. To meet this difficulty the sales manager proposed that the company should make certain improvements in its balls; that it should undertake to give the balls a distinctive finish, so that they readily could be recognized; that it should develop a suitable and descriptive trade name; and that it should conduct an extensive advertising campaign to introduce the improved product under the name selected.

Tentative investigation led the company to conclude that it would be possible to give the balls a finer grain, so that they would stand up under great weight and speed, without appreciably increasing the cost of production. This improvement would also open up a new market for the company, chiefly among manufacturers of machinery where balls were required that were equal to a greater strain than the company's balls as then made could bear.

It also appeared to be feasible, from a manufacturing point of view, to give the balls a distinguishing finish. The company had not thought of a suitable trade name. Whatever name was chosen should, in the executives' opinion, be descriptive of the balls or of some outstanding quality of the balls. The name would be registered. No details of the advertising campaign to be used had been worked out. The sales manager favored introducing the trade-marked product as something entirely new.

Yearly fluctuations in the prices of steel balls followed the changes in the prices of steel. If the steel market was falling when the company launched its campaign for the improved balls, the company would plan to maintain its existing level of prices. If, on the other hand, steel prices were rising, the company would plan to increase its prices slightly.

COMMENTARY: There seems to have been a weak spot in the F. R. Priestly Company's marketing program which the company had not diagnosed. The company manufactured a product superior to that of many of its competitors in that the steel balls which it made were free from fire cracks and, in fact, were guaranteed against such defects. The company also carried a large stock from which prompt deliveries could be made. Nevertheless, the company was gaining little benefit from having a superior product and offering superior service. It was forced to compete directly in price with other manufacturers by submitting bids to prospective purchasers. The buyers of steel balls showed little appreciation, apparently, of the quality of the F. R. Priestly Company's product or of its service.

The proposal to make further improvements in the company's product and to trade-mark it was in accordance with constructive merchandising practice.[2] Nevertheless, aside from the fact that a wider market would be opened to the company by offering balls of finer grain, there was no definite reason for expecting advantages to accrue from adoption of the proposal. Improvements in the product and use of a trade name in themselves would not necessarily assure brand discrimination by the companies buying steel balls. The F. R. Priestly Company already had a superior product but had attained no material advantage therefrom.

The fact that the company employed no salesmen may or may not have been a reason for the lack of appreciation of the quality of its product in the market. To express an opinion on that point or on other possible causes for the lack of brand discrimination would be hazardous until a thorough diagnosis had been made. The general tone of the statements in the case, however, suggests that the company had not

[2] See also Sheridan Chemicals Company, page 349.

undertaken to impress forcibly upon potential customers the fact that by using superior balls in their bearings the efficiency of their products would be raised and the products' salability thereby enhanced. It was not enough for the company to convince potential customers that its product was superior. The task was rather to convince them that it was to their advantage to use the superior product. The company's proposed advertising campaign, supported by improvements in the balls and by use of a trade name, should have facilitated this task.

February, 1928 M. T. C.

Holden Company[1]

MANUFACTURER—PIPE FITTINGS

Trade Name—*Use of Distinctive Brand Names for Identical Lines.* The company, which manufactured high-grade heavy pipe fitting specialties, controlled two subsidiary companies that manufactured directly competing lines of light-weight pipe fittings which were sold on a price basis. Each of the three lines of fittings was sold under a different trade name. It was proposed that both lines of light-weight fittings should be sold under the same trade name.

Sales Organization—*Segregation of Sales Forces by Lines of Products.* The company, which manufactured high-grade heavy pipe fitting specialties, controlled two subsidiary companies that manufactured directly competing lines of light-weight pipe fittings that were sold on a price basis. It was proposed that the sales organizations of the three companies should be consolidated.

(1926)

The Holden Company manufactured good quality heavy pipe fitting specialties for use principally on high-pressure pipe lines in the power and oil industries. The company also controlled, through majority stock ownership, two companies which manufactured light-weight pipe fittings for use in domestic heating and plumbing. The two light-weight lines of pipe fittings were directly competitive in price and quality. Prices of the heavy-weight fittings averaged about three times the prices of the light-weight fittings of similar sizes. The Holden Company had acquired control of the subsidiary companies about 1920. It had maintained the companies as separate entities and also had maintained separate sales organizations for them, although it had combined most of the manufacturing of the three companies. Officials of the Holden Company, in 1926, were considering the advisability of combining the sales organizations of the three companies and of dropping one of the brands of light-weight fittings. Although the existence of the separate corporate entities and the personal interests of a few minority stockholders of the subsidiary companies presented some legal and practical difficulties to consolidation, the officials of the Holden Company believed these difficulties could be adjusted if consolidation were desirable from a marketing

[1] Fictitious name.

standpoint. None of the three companies manufactured complete lines of plumbing supplies; each specialized in a few articles of pipe fittings such as tees, elbows, and unions.

The Holden Company had specialized for about 15 years in the manufacture of heavy-weight pipe fitting specialties, which it sold under a brand name. These specialties had certain patented and other special features which the company had emphasized through trade-paper advertising. The products had an established reputation and were sold on a quality basis. The company directed its advertising appeal to engineers in the power and oil industries. Those engineers usually were in a position to specify the type and make of pipe fittings to be used, although the actual purchasing was done by purchasing agents or by steam-fitting or plumbing contractors. The Holden Company sold its heavy-weight fittings to selected steam fitters' and plumbers' supply firms. It was represented by two or more of these selected distributors in practically every city of over 30,000 population in the United States. The company employed from three to five salesmen to visit the selected distributors about once a year to take orders, to adjust complaints, and to do a small amount of missionary work among customers or prospective customers of the distributors. One salesman was located permanently on the Pacific Coast. The others traveled east of the Rocky Mountains and had itineraries planned by the home office. The selected distributors did not have exclusive territories and were not bound to carry only the Holden line of fittings. The company protected its selected distributors by quoting a smaller discount to supply firms which did not stock Holden products regularly.

The two subsidiary companies sold their products to plumbing supply firms, which in turn sold to heating and plumbing contractors and master plumbers. The sales manager of the Holden Company stated that light-weight pipe fittings for domestic plumbing and heating were sold almost entirely on a price basis. The two subsidiary companies sold to any supply firms that wished to purchase. The list prices on the two lines were the same and the prices to distributors averaged about the same, although the discounts to distributors were varied according to competitive conditions and as a result of individual bargaining.

The executives of the Holden Company had made the following observations in regard to the buying habits of contractors,

plumbers, and supply firms. A contractor or plumber frequently confined all his purchases of supplies to a single supply firm. Ordinarily the contractors and plumbers had no brand preferences in light-weight pipe fittings. A master plumber, for instance, after estimating a job, might send an itemized statement of his requirements to his supply firm without mentioning brands; he might, for example, order "12 black iron ground ball-joint unions." He would take whatever brand his supplier sent. Building owners, contractors, and architects rarely specified the brand of pipe fittings to be used in the plumbing and heating systems. On large jobs, plumbing and heating contractors frequently listed their requirements for supplies and submitted the estimates to several wholesale supply firms, for bids on the total requirements. Supply firms ordinarily stocked only one brand in each item or line of pipe fittings. They frequently changed brands, however, depending upon price quotations. A supply firm, when its stock became low, usually reordered at the best price obtainable and, therefore, might have remnants of several brands in stock at any one time. While in general it appeared that the supply firms purchased light-weight fittings on a price basis irrespective of brand, there were many firms which would not stock the same brand as competing firms, because to do so permitted direct price comparison by customers.

There were three or four large companies in the United States that manufactured almost complete lines of pipe fittings and plumbing supplies. Those companies had branch offices in principal cities and each company usually had distributors who stocked its full line in almost every city of any consequence. The distributors, however, except in a few instances, were not under agreement to purchase exclusively from the large manufacturers, and frequently the distributors purchased light-weight fittings on a price basis from small manufacturers of limited lines of fittings. There were many small manufacturers who limited their lines to one or a few specialties such as light-weight unions or nipples. These companies sold their products on a price basis either branded or unbranded through any supply firms that would purchase. A few manufacturers who specialized in limited lines of high-grade heavy pipe fittings, such as unions for steam lines, like those sold by the Holden Company, sold their branded products on a quality basis through selected distributors.

The two subsidiary companies of the Holden Company had approximately equal volumes of sales, and the combined sales of the two companies approximately equaled the total sales of the Holden Company in dollars. Each subsidiary company usually had from one to three traveling salesmen who visited supply firms. After the Holden Company acquired control of the two companies, it combined the manufacturing departments and arranged the sales departments so that the correspondence and price quotations for all three companies were cared for by a central office. Each company, however, used its own stationery, had a separate mailing address, and had its letters signed by different sales officials. The control of salesmen of the three companies also was vested in the central office. Most of the sales of light-weight fittings were made in the central and eastern parts of the United States. The central office arranged salesmen's routings so that in general salesmen of one subsidiary company traveled only in the eastern part of the United States and salesmen of the other subsidiary company traveled only in the central part of the United States. These territories overlapped, however, so that salesmen of the two companies frequently were in direct competition. About 40% of the two companies' total sales of light-weight fittings were made through the central office by means of mail or telegraph quotations in answer to inquiries.

The salesmen for the Holden heavy pipe fittings spent about one-third of their time taking orders for the branded lines of the subsidiary companies. The Holden salesmen ordinarily made these sales to supply firms other than the selected distributors for the Holden products. The supply firms in general were unaware of the connection between the three companies. The Holden Company had not wished to identify its quality line of heavy-weight pipe fittings with the cheaper light-weight lines of fittings which were sold on a price basis. The company's salesmen commonly solicited orders for one of the lines of light-weight fittings from several supply firms in a city and then visited other supply firms in the same city to solicit orders for the other line of light-weight fittings. Neither line of light-weight fittings, prior to 1925, had been advertised in trade papers. The only advertising by competitors had consisted of one-fourth and one-eighth page advertisements in trade papers. The total sales expense for each of the three affiliated companies equaled about 10% of total sales.

A few officials of the Holden Company were opposed to identifying either of the subsidiary companies, with its light-weight fittings sold on a price basis, with the Holden Company, which manufactured only heavy pipe fitting specialties sold on a basis of quality. The salesmen for the light-weight fittings were trained in meeting price arguments and were not well qualified to sell Holden products. Those officials also advanced arguments in favor of keeping the identity of the two competing lines separate. Although the continuance of two brands resulted in considerable duplication of sales functions, it was thought that the use of two brands resulted in a greater sales volume than could be obtained with one brand. A few supply firms, for example, had stated that they did not wish to stock the same brands of pipe fittings as their nearest competitors, especially if they believed that the competitors, because of large size, were receiving additional discounts on the line. Since plumbers usually confined their purchases to one supply firm, the pipe fittings could secure wide distribution only through a large number of distributors. By making slight variations in quotations between the two competitive lines, the central office frequently could secure for one or the other of the two subsidiary companies orders which otherwise would go to other companies.

Neither of the subsidiary companies ever had sent salesmen to the Pacific Coast. In 1925 the Pacific Coast salesman of the Holden Company proposed an arangement whereby light-weight pipe fittings would be sold on a commission basis by manufacturers' agents on the Pacific Coast. The Holden Company authorized its Pacific Coast salesman to appoint as representatives for one of the subsidiary companies two agents, each of whom was to cover about half of the Pacific Coast territory, and to appoint as representative for the other subsidiary company one agent who was to cover the whole Pacific Coast. All these agents had been long established on the Pacific Coast and represented other eastern manufacturers of allied but noncompeting lines of plumbing supplies. They secured orders from plumbing supply firms and forwarded those orders to the central office. The Holden Company's salesman supervised the appointment of these agents and exercised control in regard to price quotations and credit. He received a commission on all sales made in his territory for the subsidiary companies. By maintaining the two competitive

brands the Holden Company, in this instance, was able to secure more than one exclusive representative in each territory.

COMMENTARY: Two sets of issues are involved in this case, one relating to the branding of merchandise, and the second relating to the policy of segregation of sales force.

It was sound policy for the Holden Company to keep the brand of its light-weight fittings separate from that of its more important product, the heavy-weight fittings. To have sold light-weight fittings under the same brand as the heavy-weight fittings was likely to lead to confusion of the products on the part of consumers and dealers, with danger of harming the brand reputation of the heavy-weight fittings. The latter were of a better quality than the light-weight fittings and were being promoted on buying motives other than economy in purchase. Although a separate brand was advisable, it was neither necessary nor desirable for the Holden Company to attempt to keep from the trade the fact that it manufactured light-weight fittings. A separate brand name would have been sufficient to prevent confusion between the two products in the minds of buyers and to permit their promotion through appeal to different sets of buying motives.

The wisdom of maintaining two brands of light-weight fittings, however, is open to question, especially since the company followed the further practice of maintaining separate sales forces to promote the sales of the two brands.

The executives of the Holden Company presented evidence that for light-weight fittings brand meant little or nothing. Light-weight fittings were more or less of a staple. Not only the plumbing contractors but the supply houses themselves bought largely on a price basis and were satisfied that practically any light-weight fitting from a reliable manufacturer would adequately fill the users' needs. Apparently there was little opportunity for the company to concentrate upon one brand and build for it any appreciable degree of brand preference whereby competing supply firms would stock it.[2]

Although brand apparently meant little in selling light-weight fittings, it was stated that some supply firms disliked to carry the same brand of fittings as competitors carried since to do so permitted price comparison. Accordingly, the company sold two brands so that competing dealers in the same locality might carry different brands.

It is not unusual for a manufacturer to sell the same product under two brands in order to secure more than a single outlet for his merchandise in a community. This is found in the marketing both of consumers' goods and of industrial goods. In such instances, however,

[2] See Strength Union Company (C), page 372.

there is generally a continuity of relationship between the manufacturer and the distributors for his individual brands. Ordinarily the manufacturer uses a selected distributor or exclusive agency plan for his various brands. Although this results in competition within local markets between the brands, still it has the justification of permitting the manufacturer to meet the desire of distributors to handle individual brands, and thus permits a larger amount of patronage than would be secured by selling through a single distributor in the community with all promotional efforts centered upon one brand.

In the present instance, however, we do not find this continuity of relationships between distributors and manufacturer which ordinarily characterizes the use of different brands on identical merchandise. The same distributor was likely to shift and buy different brands according to price quotations, although certain distributors apparently avoided handling at any one time the same brand that competitors were selling. Since there was a lack of continuous patronage by supply firms, and since price apparently was bound to play such an important part in the sale of this staple, with little or no brand discrimination, it is not believed that the company secured much benefit from maintaining separate brands. Although it would probably have been wise for the company to maintain a brand for its light-weight fittings to secure whatever brand discrimination was possible, it would seem feasible for the company, in order to overcome the prejudice on the part of those distributors who did not wish to stock the same brand as competitors, to sell the same fittings unbranded when necessary.

The real objection to the situation came in the setting up of separate sales organizations for the different brands with resulting expense from duplication of effort. Not only did the company have separate sales forces for its two light-weight fittings, but it had a third sales force for heavy-weight fittings which gave some time to the light-weight fittings. Ordinarily, when a manufacturer sells the same product under two brands to different distributors in a community, the same salesman calls upon both distributors with resulting economy in sales coverage. From such evidence as we have, the Holden Company was not entirely logical in its branding policy in so far as it sought sales of different brands to more than one distributor in a community, for the case states that the salesmen for the most part operated in different territories and only in certain territories were they actually competing with one another. In so far as they did compete, however, duplication of effort meant increased selling costs. Moreover, systematic coverage of the market was not likely to result.

Since economy in purchase apparently was an essential factor in securing sales, the company should have organized its selling force to operate as economically as possible so as to be able to quote favorably.

Then, through systematic selling and service, it should have sought to establish patronage upon as stable a basis as it could. To accomplish an economical and systematic coverage of the market, a single sales force handling both lines of light-weight fittings and perhaps also the heavy-weight fittings would appear suitable; the same men apparently could maintain the established relationships for the heavy-weight fittings and at the same time call on possible outlets in any locality for the light-weight fittings.

From the standpoint of organization and management of the sales force when companies consolidate, this case is similar in some respects to the case of the Munro-Cliff Company.[3]

April, 1928 N. H. B.

[3] See Munro-Cliff Company, page 245.

Prior Automatic Machinery Company[1] (B)

MANUFACTURER—BOTTLING MACHINERY

Trade Name—*Advertising Used to Transfer Goodwill from One Trade Name to Another.* The company, which was well known as a manufacturer of high-grade packaging machinery, purchased a company which had a reputation for making bottling machines of high quality. The company decided to sell the bottling machinery under its own name, but, in order not to lose the goodwill attaching to the name under which the machinery previously had been sold, to effect the change in names gradually through advertising.

(1925)

The Prior Automatic Machinery Company for 35 years had manufactured packaging machinery in Chicago. In 1925 the company purchased all the common stock of the Toledo Bottling Machinery Company,[1] of Toledo. Officials of the Prior Automatic Machinery Company, in 1925, considered whether to continue selling the bottling machinery under the Toledo name or whether to advertise and market this machinery as a product of the Prior Automatic Machinery Company.

The Prior Automatic Machinery Company manufactured machinery which was used to fill, seal, and label packages. The principal markets for the machinery were among manufacturers of food products, such as flour, cereals, and coffee. A set of the machines had a capacity of about 18,000 packages a day. This large capacity limited the market mostly to manufacturers of nationally advertised products. A set of the machinery which would take a package through all the operations of packaging sold for approximately $18,000. The company had less than 500 customers and its annual sales were over $1,500,000. The company sold directly to users. It employed six salesmen and four service men. There were three branches in the United States, in addition to the main office, and four branches in large foreign cities. The domestic branches were located in New York City, Boston, and San Francisco.

The Toledo Bottling Machinery Company for about 20 years had manufactured bottling and small canning machinery which it sold principally to pharmaceutical manufacturers and manufac-

[1] Fictitious name. See also Prior Automatic Machinery Company (A), page 200.

turers of cosmetics. The unit selling prices of the bottling machinery ranged from $550 to $4,000, and the bottling machinery company had fewer than 500 active customers with whom salesmen maintained relations. The company had a reputation among users of bottling machinery similar to that of the Prior Automatic Machinery Company among users of packaging machinery. The sales organization had consisted of branches in Chicago and in New York City, with one salesman at each, a sales manager and a salesman at the home office in Toledo, and agents in a few foreign cities. Service had been cared for by the salesmen. The annual sales of the company had amounted to approximately $150,000.

The factory of the Prior Automatic Machinery Company at Chicago was fitted to take over the manufacture of bottling machinery without much additional capital investment or change in equipment. Accordingly, after the purchase of the Toledo Bottling Machinery Company, the Prior Automatic Machinery Company discontinued the factory in Toledo, transferred all manufacturing operations to Chicago, and brought the sales manager and one salesman from Toledo to Chicago. The corporate identity of the Toledo Bottling Machinery Company was continued, and the sales organization for bottling machinery was kept separate from the sales organization for the packaging machinery. In New York City, Chicago, and Boston, the salesmen of the two companies occupied the same offices. In San Francisco the salesman for the packaging machinery also acted as salesman for the bottling machinery.

The Prior Automatic Machinery Company had spent about $35,000 annually for advertising. Fifty per cent of this appropriation had been used to advertise in trade papers which reached users of packaging machinery, and 50% had been spent on catalogs and direct-by-mail circularizing. The company advertised ordinarily in eight trade publications. It considered the burden of its advertising to be institutional, for the purpose primarily of keeping the company name before users of packaging machinery and of announcing any new improvements. The Toledo Bottling Machinery Company had advertised its bottling machinery in trade papers which reached pharmaceutical and cosmetic manufacturers. It regularly had used full-page advertisements in three monthly trade journals. Although the Prior Automatic Machinery

Company was well known to users of packaging machinery, its reputation had not extended to users of bottling machinery. The company wished eventually to become an important factor in the manufacture of bottling machinery. It believed, however, that if it discontinued the use of the Toledo name at once, it would have no more advantage in the bottling machinery trade than a new and unknown company.

Officials of the Prior Automatic Machinery Company decided to continue the manufacture of bottling machinery under the Toledo name. The company sent letters to all customers of the Toledo Bottling Machinery Company and to prospective purchasers of bottling machinery announcing the purchase of the company by the Prior Automatic Machinery Company. The name plates on new machines at first were to bear the Toledo name and trade-mark with the notation that the machines were manufactured by the Prior Automatic Machinery Company. Advertising in pharmaceutical trade papers was continued under the Toledo name without mention of the Prior Automatic Machinery Company, but with the factory location given as Chicago instead of Toledo. The Prior Automatic Machinery Company planned gradually over a period of about two or three years to make the Toledo name less prominent in the advertising and to make more prominent the Prior name until the Toledo name could be dropped entirely. It was thought that thereby the loss of the goodwill which the Toledo Bottling Machinery Company had developed would be minimized. The advertising manager planned to continue for three months the advertisements in the three trade journals under the Toledo name with the factory location changed. He planned then to insert beneath the Toledo name the note, "manufactured by the Prior Automatic Machinery Company." For a period of six months he would increase the size of the note and decrease the size of the Toledo name until at the end of that period the positions of the two names would be reversed. After a year or a year and a half he would discontinue the Toledo name in advertisements but would continue it possibly another year on the machine name plates.

COMMENTARY: The two primary issues raised in this case are: (1) whether it was advisable for the Prior Automatic Machinery Company to keep the name of the Toledo Bottling Machinery Company associated

with the bottling machinery for a shorter or longer period of time; (2) whether the goodwill associated with the one name could be transferred to the other name.

The decision of the Prior Automatic Machinery Company, after the purchase of the Toledo Bottling Machinery Company, to associate for some time the Toledo name with the bottling machinery undoubtedly was sound. Under the Toledo name goodwill had been built; the name represented a source in which the users had learned to place confidence. On the other hand, the Prior Automatic Machinery Company was not at all known as a manufacturer of bottling machinery. To throw over abruptly the name of the Toledo Bottling Machinery Company undoubtedly would have meant the loss of a selling momentum coming from the goodwill attached to the Toledo name.

On the other hand, the decision to try to shift this goodwill to the Prior Automatic Machinery Company ultimately so as to indicate this company as the source of reliable bottling machinery was wise. In the long run it probably would be economical and more effective for the Prior Automatic Machinery Company to market both types of machinery under one name. All publicity and advertising could be directed to one name and goodwill and patronage could be built about that name. The products were closely enough allied to be marketed satisfactorily under the name of the Prior Automatic Machinery Company. Moreover, the quality of the bottling machinery was as high as that of the packaging machinery, so that the Prior Automatic Machinery Company did not have to fear that the new machinery would detract from the manufacturing reputation of the company.[2]

The issue then became one of finding a method of transferring the goodwill built around the Toledo name to the Prior Automatic Machinery Company. Enough instances are known to the writer to indicate that goodwill can be transferred. Among the important considerations in such a transfer is the time element. Evidence indicates that such a transfer should be gradual. Mere announcement of purchase of a company with abrupt change of its name would appear to be a less desirable method of establishing the reliability of the new name as a source of purchase and of transferring the goodwill attached to the old name than would gradual transfer through advertising.

The method adopted by the Prior Automatic Machinery Company of gradually building up through its advertising an understanding that it was the source of bottling machinery of the high quality associated with the Toledo name, and was equally worthy of the patronage that was accorded the Toledo Bottling Machinery Company, was probably sound.

March, 1926 N. H. B.

[2] See Hardy Confectionery Company, 1 H.B.R. 424; commentary, 2 H.B.R. 526; Daving Shoe Company, 2 H.B.R. 187.

Strength Union Company[1] (C)

MANUFACTURER—PIPE UNIONS

Advertising—*To Establish Brand Recognition.* A manufacturing company which had established a preference among large industrial consumers for its branded high-grade patented pipe unions was having a subsidiary company produce and market under a separate brand, but without advertising, lighter weight unions adapted to installation and repair work in all buildings using pipes. Although the light-weight unions had no specially distinguishing features, were subject to severe price competition, and were largely in the nature of a convenience item, the company decided to attempt to build up brand recognition and preference for these unions through trade paper advertising, catalogs, and circulars. (1926)

The Strength Union Company, located in New York, for over 15 years prior to 1926 had manufactured good quality, heavy pipe unions for use principally on high-pressure pipe lines. The unions were branded and had national distribution through steam fitters' and plumbers' supply firms. Through constant advertising of its brand in the trade papers in the power, oil, and railroad industries, the company had built up a brand preference and, in many instances, a brand insistence among users. The Talbot Foundry Company,[1] a subsidiary managed by the Strength Union Company, manufactured light-weight unions for use in domestic plumbing and heating systems. Although these unions were branded as the "No Equal" unions, the Talbot Foundry Company never had advertised. The No Equal unions were sold on a price basis and had practically no brand identity among users. In 1926 it was proposed that the Talbot Foundry Company should advertise the No Equal unions in an attempt to develop brand discrimination on the part of consumers.

The Strength unions, prior to 1915, had been in much the same competitive position as were the No Equal unions in 1926. The products of the Strength Union Company before 1915 had no established brand identity except in a few local instances, and were sold largely on a price basis. The company had determined, however, on a policy of specialization in a few steam-fitting spe-

[1] Fictitious name. See also Strength Union Company (A) and (B), pages 166 and 297, respectively.

cialties such as heavy unions, elbows, and tees of good quality and durability. It then had started to advertise those products in trade papers which reached engineers, steam fitters, and master plumbers in power stations, railroads, and oil fields. Those persons usually were in a position to specify the make of pipe fittings to be used. In its advertising the company had stressed certain patented features of the unions and also other features of construction which made the Strength unions durable, reliable, convenient for installation, and in many ways superior to competing products.

In addition to trade paper advertising, the company, when it first introduced its products nationally, had circularized engineers and prospective users, and had employed missionary salesmen to visit steam fitters, contractors, and engineers. The trade paper advertisements had carried coupons by which interested persons could secure samples and further information. In analyzing groups of returned coupons on advertisements directed to the power field, the company learned that about 50% of the replies were from chief engineers and assistant engineers. After the Strength unions had been advertised for several years and had established their brand identity and secured national distribution, the company had discontinued the missionary salesmen and had omitted coupons from its advertisements. It had continued to place full-page advertisements in leading trade papers in the power and oil industries. Those advertisements continued to stress the special features of the unions and to tie in the Strength name with the products' reputation for quality. The company had succeeded in lifting the Strength unions out of the staple class, with the result that price alone did not determine sales.

The Strength Union Company, in 1926, was distributing its unions through selected steam fitters' and plumbers' supply firms. Usually two or more supply firms in each large city regularly carried stocks of Strength unions. The supply firms ordinarily did not carry stocks of competing brands of heavy unions, although they usually carried stocks of cheaper light-weight unions for domestic piping. Originally the company had appointed certain supply firms as exclusive distributors; this plan had been supplanted by the plan of selected distribution.[2] The Strength Union Company would sell to any supply firm, but it protected its

[2] See Strength Union Company (A), page 166.

selected distributors by quoting smaller discounts to those firms which did not carry stocks of Strength unions regularly. The company had three salesmen who traveled throughout the United States visiting supply firms. One of the officials also traveled extensively. The salesmen were not assigned to specific territories but were sent on trips planned at the home sales office. In addition to taking orders and maintaining cordial relations with the wholesale distributors, the salesmen did some missionary work by calling on large contractors and users and inducing them to order Strength unions from the nearest supply firm.[3] Salesmen were able to visit each supply firm only once or twice a year. During the remainder of the year the selected supply firms sent in reorders without solicitation by salesmen.

The unions manufactured by the Talbot Foundry Company were of lighter weight than the Strength unions and were not adapted for use on high-pressure lines. They were sold chiefly for use in domestic plumbing and heating installations and for use in other buildings where heating pipes, water pipes, or bathroom fixtures were required. Plumbing and heating contractors were the purchasers of pipe fittings. They purchased from local plumbing supply firms. Officials of the Talbot Foundry Company stated that building construction contractors and architects rarely specified a particular brand or make of fittings to be used, and that heating and plumbing contractors themselves rarely had any preference in unions; light-weight unions were staple products and the price for a given size and weight was the principal consideration. The plumbing supply firms likewise purchased on a price basis. A supply firm might purchase a supply of one make and, as the supply became low, ask for prices from several manufacturers. It would purchase where it was offered the best price and the best delivery. Thus, supply firms frequently had in their stocks remnants of several brands of light unions.

The Talbot Foundry Company had two salesmen who traveled out of New York and covered the northeastern and north-central parts of the United States. They sometimes were sent on trips to other sections of the United States. These salesmen called upon most of the plumbing supply firms in the territories covered and usually visited each supply firm three or four times a year. Most of the distribution of No Equal unions was in the northeastern

[3] See Strength Union Company (B), page 297.

and north central states, although the company had scattered sales throughout the United States. The No Equal salesmen were trained in making sales under price competition. Hence, they became accustomed in their selling work to use buying motives different from those used by the salesmen of Strength unions, who sold those items on a quality and specialty basis rather than on a price basis.

The three salesmen who sold Strength unions also spent a small portion of their time soliciting orders for No Equal unions. In most instances these salesmen sold to No Equal users and to supply firms other than those which regularly stocked Strength unions. Supply firms in general were not aware that the Strength Union Company and the Talbot Foundry Company were under practically the same management. When the distributors of Strength unions inquired for light-weight unions, the salesmen either mentioned the relationship between the two companies and attempted to take the orders, or they notified the home office to make quotations on the possible sales. In general, however, the Strength Union Company attempted to keep the two lines of unions separate so that the Strength Union Company's sales efforts could be maintained on a quality basis.

The annual sales of No Equal unions, in number of unions, totaled more than the sales of Strength unions. Since the prices of Strength unions ranged from two to three times as high as those of No Equal unions, however, the dollar sales total for Strength unions was about twice the total for No Equal unions. One size of Strength unions, for example, was sold to the supply firms for 50 cents, while the No Equal union of the same size was sold for 21 cents. The potential market for No Equal unions was much larger than the market for Strength unions, since the Strength unions were not applicable in many instances to domestic installations. The prevalence of price cutting by both manufacturers and supply firms on light-weight unions had resulted, in 1925, in practically eliminating the profit of the Talbot Foundry Company. The company, because it owned its own foundry, was able to meet competitors' prices, however.

The Strength Union Company, in 1926, planned to start advertising the No Equal unions. It planned to direct the advertising to plumbing and heating contractors and plumbers. The company expected that through advertising it could create brand rec-

ognition and cause plumbers to form the habit of asking for No Equal unions rather than asking merely for unions. The officials did not expect that the advertising would create a preference which would counteract any important difference in price between No Equal unions and competing unions. They did anticipate, however, that if the company continued approximately to meet competitors' prices, the recognition of, and preference for, No Equal unions would result in an increased sales volume. The expected economies which would result from the increased volume probably would balance the cost of advertising.

The No Equal unions had no patented features or any outstanding special advantages over competing unions. The company, however, because it owned a foundry and because it manufactured nothing but unions, could insure uniformity of material and workmanship. The company had somewhat higher standards of inspection than had most competing companies. In its advertising the company planned to stress good material, good and accurate workmanship, good design, uniformity, and a strict inspection at the factory. The company planned to circularize selected lists of heating and plumbing contractors with form letters emphasizing the same points which the trade paper advertising was to stress. The quality of competing unions and the frequency of sales of defective unions varied, but the company had no measure of how seriously supply firms and plumbers were concerned about the quality of light-weight unions.

Most of the competitors in the line of light-weight unions were small companies which manufactured only unions, or unions and a few other lines of pipe fittings such as tees and elbows. Those competitors had advertised to some extent in trade papers by means of one-fourth and one-eighth page advertisements but there had been no dominant advertiser of light-weight unions. Price competition had so narrowed the profit margins in light-weight pipe fittings that most of the companies manufacturing those fittings considered their earnings too small to allow for increased advertising expenditures.

The company estimated that it could increase sales of No Equal unions about 33% through advertising and increased sales efforts during 1926. This increase would bring the total sales of No Equal unions for 1926 to about $585,000. Ordinarily the Strength Union Company had budgeted its total sales expense as 10% of

sales. The total sales expenses of the Talbot Foundry Company also had averaged about 10% of sales. In order to arrive at an advertising budget for 1926, the Talbot Foundry Company budgeted its total sales expense at 10% of the estimated 1926 sales. Since the company did not expect material increases over 1925 in the sales expenses other than advertising, the addition in sales budget caused by expected increased sales represented the amount that could be spent in advertising. Exhibit 1 shows the proposed sales and advertising budgets for the Strength Union Company and the Talbot Foundry Company for 1926.

EXHIBIT 1

ESTIMATED SALES AND ADVERTISING BUDGETS FOR THE STRENGTH UNION COMPANY AND THE TALBOT FOUNDRY COMPANY FOR 1926

	Strength Union Company	Talbot Foundry Company
Trade-paper advertising	$ 19,700	$ 6,500
Miscellaneous advertising such as catalogs and circulars	13,600	10,100
Salaries, commissions, and traveling expenses of salesmen	26,200	22,900
Miscellaneous sales expenses*	37,900	18,600
Total sales and advertising expenses	$ 97,400	$ 58,100
Total expected sales	$910,000	$585,000

*This item included the freight and cartage.

The officials of the Strength Union Company decided to adopt the proposed budgets for 1926. The advertising for No Equal unions was to be carried on under the Talbot Foundry Company name without indicating the connection of that company with the Strength Union Company. The company planned to run full-page advertisements for a year in two trade papers for the plumbing industry. The distribution among the principal types of readers of one of the papers, which had a circulation of over 15,000, was 59% to plumbing and heating contractors, 18% to plumbing contractors, 3% to heating contractors, 14% to wholesalers and manufacturers, and 6% to salesmen and manufacturers' agents. The advertisements were to show a cut of a No Equal union with the No Equal name prominently displayed. The texts to accompany the cut were to emphasize the good workmanship and other good

qualities of the union and to appeal to the plumbing contractor to insure his reputation for good work by using No Equal unions. The texts also were to urge plumbers to ask for No Equal unions from the supply firms with which they traded.

After five months of advertising the No Equal unions, sales of those unions had increased about 30% over the same period of the previous year and the company's foundry was operating at capacity. The officials of the company attributed this increase largely to the influence of the advertising on distributors, since orders were received from many distributors to whom the company never before had sold. Some of these were located in territories in which the company had not previously sold. The orders of the company's regular customers also increased.

COMMENTARY: The chief issue involved in this case was whether the company, through advertising, could build a brand recognition and obtain a brand discrimination on the part of its customers for a union which had few, if any, characteristics of importance differentiating it from competing products and which had been sold in the market for some time almost solely upon the appeal to the buying motive of economy in purchase.

During the preceding 10 or 15 years the Strength Union Company had been able, through advertising and other types of sales promotion, to lift its "Strength" union to a point where consumers recognized in the brand a superior product which they preferred. As a means of analyzing the case to determine the likelihood of success in obtaining a brand discrimination for the light-weight "No Equal" unions, it would be well to compare this product and the buying motives and buying habits of consumers with the Strength unions and the motives and buying habits which obtained for them.

In regard to the Strength unions, the following conditions held: (1) They were products of superior merit. (2) At the time when the company began to promote its sales extensively through advertising and through the use of missionary salesmen, its unions had patented features which differentiated them from other unions; there was an opportunity to individualize the product. (3) The Strength unions were fitted to meet effectively a consumers' need of some magnitude. They were designed for use on high-pressure water and oil lines and on steam lines, where specially good unions were needed. In other words, in the Strength unions the company had a product which it could clearly differentiate in the minds of consumers from competing unions and which so effectively met the needs of consumers that it was possible to make a strong appeal to buying motives other than econo-

my in purchase. Dependability in use, dependability in quality, durability, ease of installation, all were strong motives for the purchase of this particular product.

Many of these characteristics which made it possible for the Strength Union Company to build up a brand discrimination on the Strength unions were absent in the No Equal unions. The No Equal unions were of an ordinary type with no noticeable characteristics differentiating them from competing products. Moreover, the particular needs which the light-weight unions filled for the consumer did not call for special characteristics such as the Strength unions had. In other words, the buying motives of dependability in quality and dependability in use were not such strong buying motives for the light-weight unions as they were for the Strength unions. Although the company expected to feature the point that the No Equal unions were uniformly dependable in quality and that the methods of inspection resulted in uniformly good quality, the evidence indicates that competing unions were of sufficiently good quality to satisfy the requirements of consumers.

From this comparison it will be seen that the Strength Union Company had a much more difficult problem in building up a brand discrimination for its No Equal unions than it had some years previously in building a brand discrimination for its Strength unions.

A second issue in the case rests on the relation of the program of distribution through supply firms to the advertising. Again it is helpful to compare the Strength unions with the No Equal unions. It is to be noted that the company had been able, through its advertising and missionary work, to lift the Strength unions above competition and to set them aside more or less as a specialty. It also adopted a specialty type of distribution for the product; at first exclusive agents had been used, and later the scheme of selected dealers.

The officials of the company did not expect, however, to obtain a brand discrimination for the No Equal unions so strong as that obtained for the Strength unions. The most hoped for was merely a preference. In other words, the desire was to have the contractor or other consumer select No Equal unions when their prices were practically the same as those for competing products.

Since this was the objective, the type of distribution used for the Strength unions would not be suited to the No Equal unions. The objective, from the standpoint of distribution, would be to get as intensive distribution as possible. It could not be expected that consumers would insist upon having these unions. The most to be hoped for probably was merely acceptance in preference to other brands where more than one was offered.

This leads to the belief that the program adopted was defective, or at least that the sought-for result was more difficult of attainment

than was realized. In the first place, it was not the custom of the supply firms to carry several brands of these light-weight unions among which they differentiated in selling to consumers, nor were the No Equal unions different enough to lead to the expectation that the supply firms readily would change their plans of buying and selling. To carry a number of competing brands would have meant a duplication of inventories which the distributors would have been loath to undertake. In other words, intensive distribution in the handling of No Equal unions by a large share of the supply firms was difficult of attainment.

In making an appropriation for advertising the No Equal unions, the company made its budget on the basis of expected increase in sales. It allotted practically all the increased appropriation to advertising and made a very small increase in its allowance for personal selling. Yet it is to be noted that the company had complete distribution neither extensively (geographically) nor intensively (among a large part of the supply firms). For a product with so few differentiating qualities, it would seem that greater sales volume would have been obtained by trying to have the product stocked by a larger number of supply firms. This would seem to call for increased personal solicitation of dealers.

In spite of the above analysis, the advertising at the end of a short period apparently was having a decidedly positive effect. It is to be noted that this was attributed largely to the influence of the advertising on dealers. The evidence of the effect upon consumers is not recorded. The advertising of light-weight unions was a new thing in the trade and probably served to attract attention and patronage to a small company and to a brand that were not well known theretofore. Whether the advertising would continue to exert such an influence, especially if competitors also advertised, is doubtful.

May, 1926 N. H. B.

National Rock Drill Company[1] (B)

MANUFACTURER—ROCK DRILLS

Advertising—*Performance Stressed in Preference to Technical Characteristics of Product.* The company for several years had advertised its rock drills for use in metal mines by means of small insertions, explaining the technical characteristics of the products, placed in eight mining trade journals. The company decided to concentrate its advertising in one of the journals, in which it would use full-page insertions, and to stress performance facts rather than technical characteristics.

Advertising—*Selection of Mediums and Appeals for New Market.* When the company, a manufacturer of rock drills for metal mines, began selling rock drills and other tools for use in rock quarries and for construction and repair work on roads, it had to decide upon an advertising plan. The company selected the mediums most consistently used by competitors. In its advertising in those mediums the company decided to stress performance facts.

Advertising—*To Establish Reliability of Seller.* Because prospective customers in some instances appeared to doubt the credibility of the statements appearing in its advertising, the company, which attributed this to their lack of familiarity with the organization, decided to replace some of its product advertising with institutional advertising. The goal of that advertising would be to establish the reliability of the company as an organizatior

(1924-1926)

The National Rock Drill Company, established in 1907, manufactured a line of air-operated tools for rock drilling, pavement breaking, and clay digging. The principal markets for its products were among operators of ore mines and rock quarries and contractors in road and building construction. The company advertised in industrial papers reaching those markets. During 1924 and 1925 the company made several changes in the type of appeal, size of insertion, and copy in order to increase the effectiveness of its advertising. In 1926 it considered further changes to meet the competition of companies longer established.

The National Rock Drill Company was organized as a subsidiary of a Chicago company which manufactured a large and varied line of pneumatic tools and air appliances, such as air drills, hammers, grinders, and riveters. In 1907 the Chicago com-

[1] Fictitious name. See also National Rock Drill Company (A), page 113.

pany had started to manufacture pneumatic rock drills for use in ore mines; in general they were not suited for use in coal mines. It encountered a strong prejudice on the part of miners against drills manufactured by eastern and middle-western manufacturers whose principal lines consisted of pneumatic tools for machine shops. Miners in general doubted the ability of these manufacturers to understand mining conditions and requirements. As one measure in overcoming the prejudices of mines, the subsidiary was incorporated to specialize in mining tools, but it was not clearly differentiated from the main company, which did all the manufacturing, until 1922, when a small separate factory was built for the National Rock Drill Company and the operations of the two companies were made practically separate.

The main company always had advertised its full line of tools, including the rock drills, in technical and industrial papers reaching machine shops, boiler building shops, ship building plants, and repair shops. The National Rock Drill Company since 1908 had advertised under its own name in eight technical mining journals. These eight publications virtually were the only publications covering the metal mining field. One of these, a weekly, covered the whole field with a circulation of about 11,000. The others, two weeklies, two monthlies, and three semimonthlies, in general covered only specific mining fields, such as Nevada or Arizona, and had circulations estimated at under 3,000 each.

The advertisements had consisted of one-eighth page cards and one-fourth and one-half page insertions placed in the group of advertising pages following the articles in the magazines. The advertisements usually had the name of the company in large print and the one-fourth and one-half page advertisements pictured and explained technical features of the construction of National rock drills. A typical one-half page advertisement showed a line drawing of a cross section of a rock drill with arrows and symbols pointing to certain air valves, bushings, and pistons. The text, in rather small print, described the indicated special technical features and points of superior construction.

The company's sales of all types of rock drills had increased gradually until in 1922 they had amounted to $180,000. The company at that time had one salesman located in Denver to cover the Colorado and part of the Utah mining districts. One other salesman traveled elsewhere in the United States where the

company wished to send him. After the National Rock Drill Company had been given a factory and management separate from the main company in 1922, it began to develop more aggressive methods of increasing its sales. It increased its sales force between 1922 and 1926 to 10 men, each with a definite territory in some mining field. The salesmen chosen were familiar with the technique of mining and in most instances were acquainted personally with mine superintendents. They spent a portion of their time with mine superintendents and workers demonstrating in actual use underground the advantages of the company's products. The superintendents, in general, were not authorized to purchase drills, but the mine purchasing agents usually purchased what the superintendents specified. Sales were made directly to the mines.

The sales manager of the National Rock Drill Company was a mining engineer who understood the requirements of the mines. The company had developed a specialized drill or tool for each class of mine drillings: "drifters," which sold at $365; "stopers," at $185; rock drills, or "sinkers," at $175; and "auger machines," at $170. The advantages which the National Rock Drill Company claimed for its products over the products of other companies were higher cutting speed, greater ease in holding, less vibration and therefore less fatigue to the operator, and lower repair expenses, resulting from the rugged construction of the company's machines.

The sales manager believed that the function of the company's advertising should be that of general publicity to keep the name of the company and its products before mine operating officials such as superintendents, foremen, and purchasing agents. The actual selling was accomplished by salesmen in competing demonstrations. In 1924 the sales manager concluded that the small advertisements were not effective as general publicity and could serve only as catalog references. He decided, accordingly, to use full-page advertisements every two weeks in the leading technical weekly publication covering the metal mining field. In the other weekly issues the company ran a card in order to keep its name in the catalog of advertisers. The company considered that the technical publication chosen covered adequately the whole metal mining field. Its circulation of approximately 11,000 copies weekly was distributed as follows:

Operating companies and executives	36.1%
Mining, metallurgical, consulting, and government engineers	26.4
Foremen, millmen, miners, prospectors	8.6
Colleges, professors, and students	6.2
Libraries	2.9
Financial	2.5
Metal buyers and dealers	3.0
Machinery dealers and manufacturers	6.0
Others	8.3
	100.0%

The rates ranged from $115 to $185 a page, depending on the position and number of insertions during a year.

The company discontinued advertising in the other mining journals, with the exception of one local semimonthly publication which had a page rate of $30. Once a month a full-page advertisement was placed in this publication for policy reasons.

The total cost of the advertising under the new plan was about $5,000 a year, which was not appreciably higher than the former total cost of the smaller advertisements in all publications.

The sales manager decided to discontinue the technical copy which had explained the construction details and technical advantages of the tools. He believed the better appeal was actual performance facts. The copy writing was turned over to the factory manager, who had had actual mining experience and could prepare the advertisements in the terminology of miners. He prepared booklets describing each type of tool. These were sent to interested persons on request. Salesmen were requested to get pictures and operating data of the National tools working underground under actual operating conditions. Demonstration tests were made in mines to compare National tools with competing tools.

The advertisements which the company placed in the mining publication during 1924 and 1925 occupied full pages and usually had a large picture of an operator using one of the National special tools. In addition to the address of the company and of the headquarters of its salesmen in the mining districts, a small amount of text was inserted, of which the following are typical examples:

Fourteen 8-foot holes
in three hours and
55 minutes!

That's what this newest member of the National Line, the Big Four Stoper, did in a Utah mine, breaking all previous records

there. In competitive tests in other mines it cut from 20% to 25% faster than all others.
Being a National, you know it will stay on the job—hating the repair shop more than a boy does school.
Wire for demonstration.

A Regular
He-Man Stoper

You will surely want to see what this new National Big 4 Stoper will do in your mine. In recent competitive tests it cut from 20% to 25% faster than others.
It is making a great name for itself everywhere it goes. Rugged construction makes it trouble-proof and keeps it everlastingly on the job.
Just the kind of stoper that red-blooded he-men like to raise Cain with—by beating the other fellow's drilling.
Ask for demonstration.

This advertising was directed primarily at mine superintendents and foremen, who were most interested in performance facts and the effects of mining tools on workmen.

The company, in addition to its line of mining tools, in 1924 started to manufacture demolition tools, such as paving and concrete breakers, clay diggers, and rock drills for excavating work. With a few changes in design, tools for this type of contracting and construction work could be adapted from the original line of mining tools. In fact, one type of the company's rock drills had been used successfully by a few railroads and quarries. The markets for the mining line and new contracting line, however, were entirely different. The new tools which the company believed would be most successful were a type of rock drill specially suited to rock quarry work and excavating work for new construction and a pneumatic paving breaker for use in tearing up old pavements. In the contracting line the rock drills, or "sinkers," sold for $170 to $175. The paving breakers sold for $175 to $195, and the clay spades sold for $80 to $100.

After successful trials with the tools of the new line among local Chicago road and construction contractors in 1924, the company started to develop a national market for these tools. The company chose selected contractors' supply firms and dealers in contractors' tools and machinery as channels of distribution. The tools were sent to the dealers on consignment for sale on commission or were sold outright to the dealers at a discount.

The company encountered additional advertising problems with its new line. The executives of the company had had no experience in selling to other than mines and they were not familiar with the advertising mediums in the contracting field. In entering the new field, the company was competing with companies which had become well established in making contractors' tools of this type. In competitive tests, however, the company had demonstrated to its own satisfaction that its tools could accomplish more work in a given time, with less fatigue to operators and with less repair cost, than could any competing tool. The prices were approximately the same as competitors' prices for tools of similar standard.

The principal purchasers of paving breakers were road building contractors and those municipalities which did street paving or repairing rather than let the work out to contractors. In selecting advertising mediums, the National Rock Drill Company studied the publications covering the stone quarry and the building and contracting industries. It selected those publications which had carried the most of competitors' advertising over a period of five years. The executives reasoned that competitors with greater experience would continue advertising in a publication only if the advertising seemed to justify itself. By this method the company selected a semimonthly publication covering the rock quarry industry, a weekly publication covering the general contracting field, and a monthly publication covering contracting and building of roads and streets. The quarry publication had a circulation of about 7,000 and charged from $65 to $85 for a full page. The monthly magazine covering the building of roads and streets charged from $110 to $175 a page and had a paid circulation of about 9,000. The general contracting weekly charged from $140 to $200 per page and had a circulation of about 30,000, distributed as follows:

Consulting and architectural engineers	14.9%
Contractors and construction companies, their superintendents, engineers, etc.	25.7
Government engineers	4.9
State and county highway engineers	9.4
Municipal engineers	7.5
Railroads, chief engineers, bridge engineers, and so forth	4.9
Public utilities and industrial plants, manufacturers, and manufacturers' agents	17.2
Others	15.5
	100.0%

The sales manager decided to place a full-page advertisement once a month in each of the selected publications and to place a one-eighth page card in the other issues of these publications. The copy was written by the man who prepared the copy for the mining publications. The total trade-paper advertising of the mining and contracting lines cost between $15,000 and $16,000 annually. This represented an increase of about $10,000 over the former cost of advertising only in the mining field. Booklets were prepared describing each type of tool. These were sent to the selected dealers for distribution as they saw fit. The bulletins also were sent to interested persons on request and were given to the branch offices of the main pneumatic tool company for distribution since these branches were expected to assist the National Rock Drill Company in maintaining cordial relations with the dealers. The addresses of the branch offices were listed in the advertising.

Appeals used in advertising the contracting line were similar to those used in the mining line. The advertisements emphasized performance facts, speed of operation, and low upkeep expense. They usually had pictures of the tools in actual operation along with a small amount of text. Typical texts of advertisements were as follows:

50% TO 100% FASTER

They had a quarter of a mile of retaining wall to tear down—good hard concrete—put in years ago, reinforced with iron bars a few inches apart. The job had been going pretty slowly with competitive machines, so two National paving breakers were put to work. Now the company has bought two more. The superintendent says "50% to 100% faster."

Nationals will save you money, too. Let us tell you more about them. Bulletin XX for Rock Drills—Bulletin XY for Paving Breakers.

Ask your own supply house for National drills.

THE NATIONAL ROCK DRILL AND UPKEEP EXPENSE

That the good National Rock Drill is a fast cutter goes without saying. That it kicks less—that it cleans the holes well—that the drill runners like it—all may be taken for granted.

Then how about upkeep expense? Consider a coal and iron company's mine in Pennsylvania. They've been operating five National Rock Drills over a period averaging nearly six years each at a repair cost per drill month of only $2.64.

Another—one of the biggest railroad lines in the country—operating 12 Nationals, for varying periods of from three to five years for each drill, at a repair cost per drill per month of a little more than 50 cents.

Ask for Bulletin XX

YOU CAN DO THAT JOB FASTER WITH NATIONALS

Whether rock drills or paving breakers, if speed is a requisite, put National machines on your work. And when we say speed, we mean more than mere inches per minute. A very great part of the gain in using Nationals lies in the fact that they stay on the job.

The company never had attempted to analyze the effectiveness of its advertising. Sales had increased from $180,000 in 1922 to $230,000 in 1923, to $336,000 in 1924, and to $460,000 in 1925. Prior to 1924 all sales were in the mining lines of drills and tools. Because certain types of the rock drills were sold to both mine operators and contractors, the sales manager did not keep separate sales figures for the two lines. He estimated, however, that about 70% of the sales in 1925 were in the mining line and 30% in the contractors' line. He believed that the greatest possibilities for expansion of sales lay in the contractors' line.

Because the company had started the manufacture of contractors' tools later than competitors, many contractors' supply firms either were exclusive agents or were selected dealers for competitors. The company's sales policies in regard to channels of distribution had been formed partially as a matter of expediency. The company had not felt justified at the start in opening separate branch offices or starting a large sales force. In 1926 the company had one salesman to cover the 70 dealers in the United States who had agreed to distribute National tools and to stock repair parts. The salesmen also interviewed dealers who were prospective distributors for National tools. The original pneumatic tool company, of which the National Rock Drill Company was a subsidiary, had branch offices in seven large cities in the central and eastern United States. Salesmen from these branches assisted the National Rock Drill Company in securing prospective distributors, receiving and answering inquiries, and sometimes in demonstrating the tools.

Although the company had received numerous requests for the descriptive booklets, it had not keyed the advertisements nor analyzed the inquiries in order to determine the value of the

advertising. The sales manager, however, from the number of inquiries received and the favorable comments reported by salesmen about the company's advertising, concluded that the company had been wise in selecting full-page space rather than small space and in giving performance pictures and facts rather than technical exposition of the superior construction features of the tools.

Salesmen of the company in the mining districts reported that one difficulty they encountered in selling National tools was that in territories which the company had not developed intensively prior to 1922 the mine executives were unfamiliar with the integrity and size of the National Rock Drill Company. Although they might read the advertisements, they apparently could not evaluate the truth of the claims made in the advertising. This same attitude was encountered among contractors who were accustomed to using tools manufactured by large companies of long-established reputation.

In order to overcome these difficulties, the company planned in 1926 to run a series of six monthly advertisements of an institutional character in its publication list in both the mining and contracting fields. These advertisements were to replace the regular specific product advertising and hence would not increase the advertising cost. The factory of the National Rock Drill Company was on the same grounds as the much larger factory of the original tool company. The advertisements were to show pictures of the entire group of factories without mention of the original tool company, pictures of tools in the process of manufacture, and appropriate text to lend an impression of size, large financial resources, precision in manufacturing, and responsibility.

COMMENTARY: Although numerous points which might be discussed are raised in this case, the commentary will be restricted to a discussion of the following considerations: (1) the question of the promotional burden to be borne by the advertising of this company in its merchandising in different industrial fields; (2) the question of the choice of selling appeals; (3) the problem of the selection of mediums.

The Burden to Be Borne by the Advertising

The sales of the products of the National Rock Drill Company were dependent primarily upon personal selling both in the mining field and in the contractors' field. The air-operated tools were an important part of the working equipment of the users. The company's salesmen in the

mining field were technically equipped to demonstrate the uses of the machines, and in their selling they found that the buying motives of users of these tools could be most effectively appealed to through demonstration. Since the mining fields were relatively well defined geographically, the company was in a position through its direct selling organization systematically to cover the prospective users of such equipment. For the mining field, then, the function of advertising was to establish in the minds of the users the idea of the reliability of the seller and to build up an association between the brand name and those characteristics of the machines which might lead to their purchase in preference to other air-operated tools. Relatively, personal selling efforts were far more important in this market than the promotional influence of the advertising.

In the sale of its tools to quarries, to road contractors, to municipalities, and to building contractors, however, the company might well have expected to place more of a selling burden upon the advertising. The desirability of using demonstration and aggressive personal selling was probably not less here than in the mining field, but the opportunities for using such aggressive methods were not present. Because of the scattered character of the market and the differences in users' buying habits, the company decided to distribute its tools through contractors' supply dealers.[2] The company did not have exclusive arrangements with its contractors' supply dealers which permitted it readily to obtain a systematic coverage of the field. Personal selling through dealers for the contractors' line was evidently more passive than the direct selling in the mining field. Accordingly, while personal selling would still be the dominating factor in the promotion of a sale of the tools in the contractors' field, still the company might well have planned to place a relatively heavier burden upon the advertising in the contractors' field than in the mining field, in order to have overcome the weaknesses attendant upon selling through the intermediary of dealers.

The bearing of this conclusion upon the character of the advertising copy and the mediums to be used will be taken up later in this commentary.

The Character of the Advertising Copy—Appeals to Buying or Patronage Motives

After 1922 the National Rock Drill Company became more aggressive not only in its personal selling but also in its advertising. It is to be noted that the company's sales force in the mining field was increased several fold in order to provide more effective coverage and exploitation of the field. At the same time, the company increased the size of its advertising copy and the frequency of appearance. To what extent

[2] See commentary upon National Rock Drill Company (A), page 120.

the increase in size of copy and frequency of appearance was effective in its sales to the mining field cannot be determined from the data which the company had. Since effective personal selling and systematic coverage were probably the essential factors in increasing sales, we can say that increased space was justifiable only in so far as it aided the salesmen in establishing the patronage motive of the reliability of the seller and an association in the minds of prospects between the more potent buying motives for tools and the National Rock Drill name.

A more positive answer can be given in regard to the desirability of the change in the copy and selling appeals subsequent to 1922. Apparently, two things were sought in this change of copy approach at that date: (1) a more frequent appeal to the strongest buying motives for the tools of the company than formerly; (2) a more dynamic presentation of buying motives than formerly.

In this discussion of appeals, the appeals made to specific buying motives for the *product* will be differentiated from the appeals designed to evoke patronage of the *company.*

Appeals to Buying Motives for the Product

The advantages which the company claimed for its products were higher cutting speed, ease in holding with less vibration and therefore less fatigue to the operator, and light weight with rugged construction, which insured lower repair expenses than competing machines incurred. In presentation of data concerning the high cutting speed, the company was appealing to the buying motives of economy in use and of enhancing productivity when addressing the officials of the mines, and to the motive of proficiency, the desire to excel in personal accomplishment, when addressing operators of machines. In presenting data concerning the ease of holding, the freedom from excessive vibration, and light weight, the company was appealing to the motives of safeguarding the welfare of employees when speaking to employers, and to the motives of personal comfort and protection of health when addressing operators. In presenting data concerning the rugged construction of machines, the company had opportunity to appeal to the buying motives of durability and economy in operation. These all were potent buying motives for the purchase of such equipment.

Copy prior to 1922 consisted primarily of construction and design details about the machines. This copy was designed apparently to stimulate the motives of dependability in quality and dependability in use. While limiting copy primarily to design and construction details, the company may have fallen into the error that frequently characterizes such advertising efforts; namely, a loss of the point of view of buyers. Apparently, failure to appeal to the strong buying motives for such a product resulted from a mere citation of construction details. Subsequent to 1922, much of the copy was built about performance

facts. Through this approach the company apparently accomplished two important improvements in its copy: (1) It made an appeal to stronger buying motives than it had used before. It gave industrial buyers an idea of what the products would do rather than of how they were made. It appealed strongly to the important motives of economy in use and operation and enhanced productivity from use of the machines. (2) The copy took on a greater interest and attention value. Citation of performance facts partook of the nature of news. By using copy with greater attention value and greater interest, the company was probably able to get its advertising message read more frequently and to build a stronger association between its effective buying motives and the products than it could with copy built primarily on a citation of design details.

What has been said is not meant as a denial of the value in industrial advertising copy of design and construction details. Undoubtedly, buyers were interested in specific details concerning the construction of the machines and such details might well have appeared in the advertisements. Design details should not be used, however, so as to hide or prevent a dynamic presentation of the strongest buying motives available for the products.

While no attempt will be made to criticize in detail the examples given as representative of the copy subsequent to 1922, the following considerations of copy approach are brought forward. Since the tools of the company were said to have the definite advantages of high cutting speed, light weight, minimum of vibration, and durability, the company should have so laid out its campaigns that these buying motives would become definitely associated with its products, especially the high cutting speed. In consumer advertising the value of building campaigns upon specific dominating ideas so as to provide a strong association between the products and the strongest buying motives for the products has become recognized. This company should have tried to build up in subsequent campaigns dominating ideas to be associated with its products.

The paucity of selling argument which characterized the copy subsequent to 1922 might be questioned. While the short copy may have permitted a large illustration and a layout of high attention value, and might be upheld on the belief that short copy is more likely to be read than long copy, yet the articles sold were of enough importance to interested prospects to lead to extensive reading of specific data concerning the machines, provided the facts given were concrete and definitely appealed to the prospects' interests. While it would have been undesirable to cover up with details the dominating idea to be conveyed by any piece of copy, the possibility of presenting strong selling arguments for the machines should not have been foregone.

This recommendation for a more complete sales presentation in the advertising copy was especially applicable in the advertising to the contracting field. As pointed out in the first part of this commentary, the company was assured in the mining field of securing an effective personal presentation to practically all the prospects. In the contractors' field it was less certain of getting an effective and systematic personal sales presentation through its contractors' supply houses. Accordingly, it would have been desirable to throw upon the advertising a fairly heavy burden—to have attempted in the copy to present a rather complete sales argument for the tools. Such copy to the contracting field should have been designed to elicit inquiries which could be referred to the supply houses.

Change of Copy to Establish Patronage Motives

The National Rock Drill Company was organized in 1908 as a subsidiary of a large pneumatic tool company to overcome a doubt on the part of miners in the ability of the company to provide specialized equipment. By giving up its identity in selling tools to the mining field, however, the parent company sacrificed opportunity to appeal to the patronage motive of reliability of the seller. The subsidiary appeared to prospective users as a small new company. It lacked the established reputation for solidity, financial strength, and for integrity which the parent company enjoyed. In 1926 this lack of reputation for reliability was still felt in mining fields that had not been thoroughly covered previous to 1922 and in the contracting field where the company was a newcomer competing with large, well-established companies.

Since one of the main objects of the advertising was to pave the way for salesmen by establishing in the minds of prospective users a reputation for reliability, the company was justified in giving special attention in its advertising to this patronage motive. The commentator would recommend a procedure, however, different from the so-called "institutional" campaign adopted.

In a large part of the mining field the National Rock Drill Company had established not only its ability to provide specialized equipment but also its reliability. In the contracting field its experience was briefer, but it had made numerous installations. A reputation for reliability is something that is built up over a period of time through customers who have learned through experience that a company is worthy of confidence in fulfilling its promises and in delivering trustworthy products. The National Rock Drill Company had opportunity through a citation of testimonials in the form of actual performance facts to establish a reputation for reliability in the minds of new prospects at the same time that it was promoting the sale of its machines. It is doubtful whether prospects would be attracted or interested in

institutional advertising to the extent that they would be interested in what the products could do for them. The testimonials of performance would carry the connotation of reliability. Moreover, the company, in its personal selling, had opportunity to demonstrate the truth of its advertising claims.

Since the National Rock Drill Company over a period of years had established its ability to provide specialized equipment, it is doubtful whether the original need of hiding its relation to the parent company existed. In other words, the desirability of the National Rock Drill Company's identifying itself in its advertising as a subsidiary of the parent company and thus attracting to itself the idea of size and financial responsibility inherent in the parent company should have been given careful consideration. At any rate, the advisability of a campaign of straight institutional copy, especially in so far as it might have interfered with specific product advertising, is questioned.

In the advertising of its products, the company should have taken great pains to present credible copy. As has been pointed out by Professor Poffenberger[3], actual facts may be presented in a form in which they will not be believed. Accordingly, in making claims and in citing specific data, care should be taken to see that the copy appears believable. Understatement rather than overstatement of claims would probably help to build a reputation of reliability for the company.

Selection of Mediums

Not enough data are presented regarding the selection of mediums to make it possible to draw any definite conclusions. The guiding principles which apply in the use of mediums in industrial advertising would apply.

The company's first task was to delimit the market for its tools. This was fairly easy in the mining field. The markets for its quarry and contractors' tools were less well defined, yet relatively clear.

A second task was that of determining the persons to be influenced; namely, not only those who were the buyers of the products, but also others whom it was worth while to address because of their influence upon purchasing.

The industrial papers selected should have been those which best reached the company's market in the light of the two preceding considerations. This required a study of the editorial character of the mediums and an analysis of their circulation. When entering the contracting field the company's decision to appear in the same mediums as leading competitors was an expedient approach but was not conclusive in itself.

In addition to industrial papers, the company was issuing certain

[3] Albert T. Poffenberger, *Psychology in Advertising* (Chicago, A. W. Shaw Company, 1925), chap. xxii.

booklets describing the machines and presenting sales arguments which might induce machine buyers to purchase. From the data given it does not appear that the company was making as effective use of these booklets and other direct-mail mediums as it might, especially in the contracting field. In the contracting field the company was depending for distribution upon contractors' supply houses. Its industrial paper advertising to contractors in no way localized demand; that is, it did not inform purchasers of the dealers to whom they might turn for demonstration of the machines. Mailing of these booklets and other literature to contractors and quarry men, informing them of the location of local representatives, would appear to have filled a logical function in the company's program of sales promotion. By this means, direct-mail efforts would have been coordinated with the industrial paper advertising. At the same time, local dealers should have been educated in effective personal sales presentation and in coordinating their efforts to bring the largest possible results from the whole campaign of advertising.

January, 1927 N. H. B.

Buckner Textile Machinery Company[1]

MANUFACTURER—TEXTILE MACHINERY

Advertising—*Revision in, to Increase Effectiveness.* The company, a manufacturer of textile machinery, considered several plans for revising its advertising, which apparently had had little influence on sales. The company customarily advertised in trade papers and sent catalogs of its products to textile mills. It was recommended that the company discontinue its trade paper advertising and perhaps increase its direct-mail advertising or that it continue both types but make certain changes in the copy of its trade paper advertising.

(1924)

In the summer of 1924, the Buckner Textile Machinery Company concluded, after investigation, that its advertising in trade journals during the previous 10 years had had no apparent effect upon sales. Several modified programs of advertising were suggested.

The company manufactured all types of machinery for use in the manufacture of cotton yarns. Of the total machinery of this type sold in the United States, the company manufactured approximately 40%; its largest competitor produced about 40%; and three smaller firms together produced about 20%. About half of the 2,200 cotton textile mills in the United States were customers of the company.

The assistant treasurer, the plant superintendent, and seven salesmen of the company sold the larger part of the company's output. Some sales were made by the 12 men whom the company employed to furnish installation and repair service to users of Buckner textile machinery. With a few exceptions, cotton mills were located in the southern, middle Atlantic, and New England states. Because of this concentration in location, the comparatively small number of cotton textile firms, and the large size of unit orders, which averaged about $35,000, it was feasible for the company's salesmen to keep informed as to the machinery needs of all active and potential customers. In general, one of the company's salesmen called on each cotton mill in the United States at least once a year.

[1] Fictitious name.

When textile mills built additions to their plants, they often asked the company to send salesmen to make estimates upon the cost of equipping the new plants.

Since 1921 the company had spent about $20,000 annually for advertising. Of this sum, approximately $12,000 was used for direct-mail advertising, and approximately $8,000 for advertising in the trade journals of the cotton textile manufacturing industries and in yearbooks of textile schools.

The direct-mail advertising consisted of a biennial catalog of about 225 pages and supplementary pamphlets issued between editions. The catalog was printed on a good grade of coated paper and was well bound in an imitation leather binding. Brief descriptions of all the machines manufactured by the company and illustrations of a majority of them were included in the catalog. In addition, the catalog contained miscellaneous information about textile machinery and its uses, such as a description of the method of calculating the speed of gears and pulleys, and a short treatise on the care of belting. This catalog the company sent to at least one executive of each cotton textile mill in the United States. The supplementary pamphlets, which were from 4 to 18 pages in length, were confined solely to descriptions of improvements which had been made in the machinery and of new models which had been developed. The frequency with which the company issued supplements depended entirely upon the introduction of new machines or improvements. The company's competitors followed similar policies in issuing catalogs and supplements.

EXHIBIT 1

DATA CONCERNING TRADE JOURNALS USED BY THE BUCKNER TEXTILE MACHINERY COMPANY

Trade Journal	Circulation	Rate per Page	Location of Majority of Subscribers	Positions Occupied by Subscribers
Cotton	7,500	$70.00	South	20% executives 80% department heads
Textile World	8,500	96.00	All sections of United States	Chiefly executives, managers, and purchasing agents
Southern Textile Bulletin	3,261	45.00	South	Department heads
American Wool and Cotton Reporter	9,000	79.20	All sections of United States	Managers and executives. Journal contains financial data
Fiber and Fabric	.....	60.00	New England	Foremen of spinning rooms

The company's advertisements in trade journals had been of about the same character and size, and had been inserted with about the same frequency, as those of the company's competitors. Each advertisement usually consisted of a cut of one of the company's machines, the company's name and address printed in large type, and a brief text.

Exhibit 1 gives data concerning the five trade journals in which the company advertised.

With the exception of *Cotton,* which was issued each month, the trade journals listed in Exhibit 1 were published weekly. The Buckner Textile Machinery Company had been inserting a full-page advertisement in each issue of *Cotton,* a full-page advertisement every two weeks in the *Southern Textile Bulletin* and in the *American Wool and Cotton Reporter,* and a half-page advertisement once a month in *Fiber and Fabric* and in the *Textile World.*

In the summer of 1924 the company employed a new advertising manager to prepare its catalog and to attend to all other forms of its advertising. This advertising manager proposed a substantial change in the company's advertising policy and submitted three alternative plans.

One of the plans provided that the company should discontinue all trade-paper advertising and rely entirely upon its catalogs and supplements. The officers of the company could not recall a single instance in which the company had made a sale as the result of an inquiry arising from its advertisements in trade papers. The trade papers, however, from time to time in their news and editorial columns mentioned the company or its products. When the company had introduced new types of machinery, the trade publications had printed cuts and descriptions of the new machinery as news.

Another of the plans suggested by the advertising manager provided for discontinuance of the trade-paper advertising and for increased use of direct-mail advertising. Under this plan, the catalogs and supplements would be sent to a larger number of executives at each mill and, in addition, circular letters would be sent out from time to time. The advertising manager stated that the treasurer, the purchasing agent, and the foreman of a textile mill usually conferred before a large purchase of machinery was made, although the order ordinarily was placed by the treasurer.

Routine purchases usually were made by the purchasing agent. If this plan was adopted, an effort would be made to give the advertising a more direct selling appeal than it then had.

The third plan provided for no change in the existing type of direct-mail advertising, but provided that the trade-paper advertisements should be altered to include longer text. The copy could be either institutional or descriptive of the company's products. The advertising manager submitted, as examples, the following two advertisements, the first of which was institutional in type and the second of which was descriptive; no illustrations would be used with this copy.

ONE PLAN, ONE MANAGEMENT

Since the inception of this concern, in 1831, nearly 100 years ago, the shop, as it is known to those who are in any way connected with it, and the management have been as one.

Since the day the first Buckner picker was built, there has been a sense of loyalty between the employer and employee, the one to the other, which has been and is reflected in quality and workmanship of all that has been produced by this plant.

Today, on the basis of the severe modern competition, these two attributes stand all in good stead.

Due to being a self-contained unit under one roof, more careful supervision over design and more uniformity and consistency in manufacture is had than is possible in a plant of several separate units. And for the same reason, by the cooperation engendered thereby, the words "Buckner" and "Quality" are synonymous.

Visitors are cordially invited at all times.

BUCKNER TEXTILE MACHINERY COMPANY
New England

BATH MATS TO CASKET CLOTH

The above sounds and looks unusual. But why not utilize your own cotton waste?

Jute, flax, hemp, cotton, and wool have all been made to do their part in the manufacture of such goods as wire insulation covering, towels, rugs, tapestries, cretonnes, suitings, hosiery, blankets, mop yarns.

This wide range of articles is being made today from yarn prepared and spun by the Buckner full roller card and Buckner cotton and wool waste spinning frame.

Send in your problems concerning this question and let our representatives talk it over with you.

BUCKNER TEXTILE MACHINERY COMPANY
New England

COMMENTARY: Advertising could carry only a very small part of the selling burden for the Buckner Textile Machinery Company, as attested by the following facts: There was a limited and well-defined group of purchasers, who knew well the few sources of supply for textile machinery. The average cost of an installation was high, and this fact meant that all the sources of supply were likely to be considered and consulted before an order was placed. The technical character of the products called for a high type of personal selling. Furthermore, personal contact between buyers and representatives of the company was continuous and the buyers' need of equipment was known to the Buckner Textile Company considerably in advance of purchase. Moreover, the demand for the equipment was a derived demand and could not be stimulated in a large way through advertising.

The use of catalogs was in accord with confirmed buying habits of purchasers, and the industrial catalog performed a service for the buyers. Accordingly, its continued use was undoubtedly advisable. Although such a company might get along without advertising in the business papers of its field, failure to appear might be misunderstood. This company undoubtedly reflected the feeling of many large manufacturers that since the industrial papers perform a service to the industry they should be given advertising as a subsidy, even though the advertising may perform no large service for the manufacturers. Although such an attitude may have some merit, it represents a short-sighted policy toward the use of industrial papers by such a company. Any space that was purchased should have been made to perform a sales service and to help attain a definite sales objective. Card advertising and uninteresting, lifeless advertising have been too characteristic of some industrial advertisers. The Buckner Textile Machinery Company should have used its industrial paper space to present ideas concerning its products which would be of real service to the readers of the papers, both as a means of stimulating demand for new developments, in so far as possible, and secondly for stimulating patronage motives and establishing the reputation of the company.

February, 1928 N. H. B.

Aran Manufacturing Company[1]

MANUFACTURER—RAILROAD EQUIPMENT

Sales Promotion—*Direct-Mail Advertising* vs. *Personal Selling and Trial Sale.* When the company, a manufacturer of railroad equipment, began selling an improved type of accessory for steam locomotives, it found that railroads were securing most of their requirements of this apparatus from one of its competitors. To overcome the sales resistance encountered by the company's salesmen in attempting to introduce the product, the sales department recommended that the salesmen make more intensive efforts to reach the proper railroad officials and that the company permit railroads to use the equipment free of charge until its worth had been proved. The marketing research department, however, wished the company to undertake a campaign of direct-mail advertising addressed to all railroad officials or employees interested in the purchase, use, or upkeep of locomotive equipment.

(1923)

When the Aran Manufacturing Company in 1923 attempted to market an important accessory for steam locomotives, it found that the railroad companies were securing most of their requirements of this apparatus from one of its competitors. Three other firms also manufactured apparatus of this type, but their sales were comparatively small. It was necessary for the company to develop a program for overcoming the sales resistance which its salesmen encountered in attempting to introduce the new product.

The Aran Manufacturing Company had national distribution through its own sales branches for the railway and other equipment that it made. It employed skilled engineers to develop new products and to improve its old ones. After several years of experimentation, the engineers had perfected the accessory for which the company sought a market. Tests of the accessory in actual use had satisfied the executives that it was superior to competing products. It had been tested on the locomotives of one railroad company and, as a result, that company had placed half its orders for that equipment with the Aran Manufacturing Company. The selling price of the company's equipment was $650, as compared with $600, the price of competing equipment.

[1] Fictitious name.

The main selling appeals for the accessory were its simplicity, its durability, and its infrequent need of repairs.

At first the company had undertaken to have its salesmen introduce the new item when they called upon railroad companies to secure orders for its other products. This plan had been unsuccessful. The railroad companies appeared to be satisfied with the equipment they were using; in some instances they were under contract to buy from the company's chief competitor; the company's salesmen were interested primarily in the total volume of their sales and, because of the sales resistance, did not push the new product; in many instances the proper officials were not seen by the salesmen. On the few pieces of this equipment that it had sold, the company had experienced a loss because of the small volume of production.

The sales department recommended, as a means of promoting sales of the equipment, that more intensive efforts be made by the salesmen to reach the proper officials of railroad companies, and that the company permit the railroads to use the equipment free of charge until its worth had been proved. The sales specialist in charge of marketing the equipment stated that several sales of the equipment had resulted from tests which railroad companies had been induced to make by such an offer, and that, incidentally, valuable information had been obtained as to relative merits of the company's product and competing products.

Officials in the company's marketing research department, however, were convinced that such sales efforts would be unavailing in view of the apparent satisfaction of railroad executives with the equipment supplied by the company's competitors, and in view of the salesmen's lack of interest in the equipment because of the sales resistance encountered.

The marketing research department prepared plans for an advertising and sales compaign which it believed suited to the introduction of the new equipment. To insure the proper coordination, it was proposed that one person be made responsible for every phase of the campaign. A comprehensive mailing list was to be prepared of all railroad officials or employees interested in the purchase, use, or upkeep of locomotive equipment; much of this information could be obtained from the *Pocket List of Railway Officials*. A personal letter signed by one of the chief executives of the Aran Manufacturing Company would be sent

to each important executive on the mailing list. These letters would be general, designed merely to arouse interest and to impress the recipients with the company's interest in their particular problems. At the same time that these letters were sent, a letter and folder, describing the merits of the apparatus, would be mailed to each minor official and mechanic on the mailing list. Return cards would be enclosed with both types of letters.

It was expected that replies would be received from men responsible for purchases. To each individual replying to the first letter would be sent a personal sales letter and a bulletin describing the technical aspects of the accessory. These letters, also, would be accompanied by return cards, which, if used, would assist the Aran Manufacturing Company's salesmen to reach the proper officials. A special salesman would interview each individual replying to this follow-up and would report the results of the interview to the executive in charge of the campaign.

To those persons who did not reply to the first letter within three weeks, a second letter, with a card enclosed for reply, would be sent; the purpose of this letter was to secure the recipient's attention and to inform him that the company had issued a new bulletin containing detailed technical information about the apparatus. To the companies from which no answers to the second letter were received, a third letter would be mailed, stating that the Aran Manufacturing Company's specialists would be pleased to consider any problem relating to the use of the equipment and to submit more detailed information about it.

An objection was raised to the advertising campaign outlined, on the grounds that the apparatus was sold according to specifications prepared by the purchasers' engineers and, therefore, was not a product which could be sold by advertising.

COMMENTARY: The chief problem of the company lay in securing an intelligent selling effort for its product. Although well designed direct-mail matter concerning the accessory might have been helpful in paving the way for salesmen, a high degree of personal selling was essential to adoption in practically every case. Advertising, in itself, was of no great value unless it was closely coordinated with an intelligent personal selling program.

A plan of demonstration as recommended by the sales department would have had considerable merit in introducing a product of this kind, the worth of which was not yet established.

February, 1928 N. H. B.

Glenister Sprinkler Company[1]

MANUFACTURER—SPRINKLER SYSTEMS

ADVERTISING—*By Small Firm Whose Competitors Advertised Widely.* The company, a manufacturer of automatic sprinkler systems for fire protection, reviewed its advertising program. The company's advertising consisted of insertions in directories and buyers' guides and of direct-mail letters. The company also planned to send to prospective customers booklets describing large contracts which it had been awarded. Competing firms, larger than the company, advertised in general magazines and on billboards.

(1925)

Early in 1925, the Glenister Sprinkler Company, which manufactured and installed automatic sprinkler systems for protection against fire, reviewed its advertising program. The company had a manufacturing plant in the eastern section of the United States and sales offices in six of the larger cities. It planned to open two sales offices in the South during 1925. The company was one of those approved by the Fire Insurance Exchange, and its equipment, consequently, frequently was recommended by fire insurance companies to their clients. Sales of the company from 1920 to 1924, inclusive, were as follows:

1924	$1,500,000
1923	1,200,000
1922	1,000,000
1921	1,000,000
1920	800,000

Inasmuch as the three important companies with which the Glenister Sprinkler Company competed sold products equal in quality to its own, the company secured a majority of its contracts on a price basis. Overhead expenses of the company were about 15% of sales. In figuring its bids, the company usually added 20% to the cost of labor and material, thus allowing 5% for net profit. Terms of payment asked by the company were similar to those prevailing among building contractors. It was customary to require a remittance each month equal to 85% of the cost of the material and labor put into the job during the month, and to collect the balance upon the completion of the

[1] Fictitious name.

contract. Most contracts were completed within six weeks. In some instances, the Glenister Sprinkler Company was willing to accept payment in installments over as long a period as five years, charging interest at the rate of 6% or 7% per annum on the unpaid balances.

The company employed nine salesmen to call on architects, engineers, and builders, and sent out each year approximately 10,000 letters, costing $3 a thousand. Two-cent stamps were used, which made the total annual cost of the letters about $230. The mailing list was compiled from inquiries received by mail and from the F. W. Dodge Company's reports on new buildings. Those reports were received daily and cost $2,000 annually. By means of letters, the company endeavored to secure copies of the plans of new buildings in which sprinkler systems probably would be installed. When there was no response to the first letter, a second one was sent. Approximately one-half of those to whom letters were sent responded, and about 5% of those who responded purchased from the Glenister Sprinkler Company.

For several years, the company had spent about $1,000 annually for card advertisements in directories, buyers' guides, and telephone books circulating in the localities in which its sales offices were located. These advertisements gave the name and address of the company, and featured some phrase, such as "Stop that Fire!" Usually, two advertisements each year were inserted in books which architects published and distributed to clients and prospective builders. This space cost the company about $150 annually and was used chiefly to maintain the goodwill of the architects.

The Glenister Sprinkler Company planned, during May, 1925, to send to a mailing list of architects, engineers, and prospective purchasers 10,000 booklets describing some of the large contracts which had been awarded to the company and enumerating some of the fires in which its equipment had been used. It was estimated that the cost of printing the booklets and placing them in envelopes would be $800. Since 2-cent stamps would be used, the total cost would approximate $1,000. The company had done no advertising of this type previously.

The manager of the New York sales office of the Glenister Sprinkler Company, who controlled all the company's advertising, stated that contractors, as a rule, did not advertise extensively.

However, the Belter Automatic Sprinkler Company,[2] the largest of the Glenister Sprinkler Company's competitors, did advertise nationally in general magazines. It was estimated that this company, which had manufacturing plants in the East, South, and Middle West, spent approximately $125,000 a year for advertising. The theme of the advertising was that equipment for protection against fire was one of the best investments which building owners could make and that the resulting saving in fire insurance costs would more than pay for the cost of the sprinkler system. The advertisements also pointed out that a company, while rebuilding as the result of a fire, was out of business and hence losing money even though the fire loss was covered fully by insurance. The sales of this competitor were estimated to be $8,000,000 a year.

The Belter Automatic Sprinkler Company maintained 25 sales offices in the United States and had at least 50 salesmen, known as contracting engineers. In addition to the magazine advertising which it did, this company sent out a bulletin quarterly to a large mailing list. The mailing list was composed chiefly of names of persons who had asked the company to send them the bulletin. The bulletin contained articles describing the fire sprinkler equipment installed by the company and a complete record of the recent major fires which had occurred in the United States.

The Belter Automatic Sprinkler Company had salesmen who sold only to other installers of fire extinguishers. No other sprinkler company had salesmen selling only to firms making installations. The New York manager of the Glenister Sprinkler Company stated that the Belter Automatic Sprinkler Company made a larger profit on the equipment which it sold for installation than it did on equipment which it installed itself. He maintained that, if it were not for this profit on sales for installation by other firms, the Belter Automatic Sprinkler Company could not afford to spend as much as it did for advertising.

The second largest competitor of the Glenister Sprinkler Company had annual sales of approximately $3,500,000. This company, which had its plant in the Middle West, did no advertising. The third largest competitor, with annual sales of $2,500,000, used billboards along the railroad tracks of several eastern railroads. This company, which was located in the East, also sold

[2] Fictitious name.

heating equipment, but the billboard advertising was devoted solely to sprinkler systems. Some newspaper advertising also was done by this company.

COMMENTARY: Several important facts are to be noted in the case of this company: (1) It was a small company in a field dominated by large competitors; (2) its sales were limited to six large cities; (3) good lists of prospects at whom to direct sales and promotional efforts were available; (4) the limited volume of sales of the company, the character of the competitive conditions, and the narrow margin which it had to devote to advertising and promotional work ruled out a program of general periodical advertising to stimulate a primary demand. This development of primary demand was a task either for the cooperative effort of several manufacturers or for the large manufacturers who covered the entire field for such equipment. The Glenister Sprinkler Company was not in a position to devote its limited appropriation to reaching other than those who were good prospects in its territory. Accordingly, the use of direct-mail advertising to prospective purchasers, architects, and contractors was sound. The immediate objective of the advertising, of course, would be to elicit inquiries as an aid to personal selling effort. In its advertising there was an opportunity for the company not only to make use of patronage and selective buying motives but also to appeal to strong primary emotional motives, inasmuch as there was a large undeveloped field for such protective apparatus.

February, 1928 N. H. B.

Newell Hardware Company[1]

MANUFACTURER—SLIDING-DOOR HARDWARE

Advertising—*Development of a Campaign.* Because its sales had been decreasing during the previous five years and in order to meet the competition of a manufacturer who advertised extensively, the company, a manufacturer of sliding-door hardware, employed an advertising agency to make a survey of the market for its product and to draw up advertising plans. The agency, as a result of its investigation, recommended that the company conduct a six weeks' test campaign of advertising to consumers and that it advertise to architects, contractors, wholesalers, and retailers in trade papers. The company adopted the proposed campaign. Few inquiries were received as a result of the test campaign, no new accounts were obtained, and, although sales increased as a result of the trade paper advertising, increased sales expense caused a decrease in net profits. At the end of eight months, therefore, the company was uncertain whether to continue the advertising campaign.

(1927)

The Newell Hardware Company manufactured all types of sliding-door hardware. Although the sales of this product constituted only 25% of the total sales of the company, they yielded a substantial profit. Since 1920 the company's sales of sliding-door hardware had been decreasing, and in 1925 the executives of the company considered the use of advertising in order to increase the sales of this product.

In 1879 the founder of the Newell Hardware Company invented and patented a covered, round trough track for sliding doors. This track protected the wheels on the door hangers from obstructions, and by means of its rounded design reduced friction to a minimum. The company was incorporated in 1880 to manufacture this type of track, which, at that time, was an innovation in sliding-door hardware. Gradually the manufacture of other products was undertaken, until in 1925 the company was making a complete line of sliding-door hardware, consisting of all types of tracks, hangers, and brackets, and in addition was making kalemein, tin, and fire doors, monorails, and sliding ladders. The total sales of the company for 1925 were $700,000, divided among the classes of products as follows:

[1] Fictitious name.

Sliding-door hardware	29%
Fire-door hardware	4
Kalemein doors	39
Tin doors	14
Fire doors	10
Monorails and ladders	4
	100%

The profit on sliding-door hardware was approximately 10% higher than the profit on any other class of product. Furthermore, the equipment for manufacturing this product was operating at only 50% of capacity. A larger amount of hardware could be produced at little increase in labor or overhead expense.

Competitive conditions and freight rates confined the sales of the Newell Hardware Company to New England, New York, Pennsylvania, Ohio, West Virginia, Maryland, Delaware, Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Washington, Oregon, and California.

Sliding-door hardware consisted of three parts: a track; hangers, which supported the door; and brackets, which supported the track. The sliding-door hardware made by the Newell Hardware Company was, in the opinion of the executives, the highest grade of hardware of that type manufactured. The round trough track was as strong and rigid a type of enclosed track as could be made. In addition, the round trough centered the trolley wheels on the hanger and thereby reduced friction and practically eliminated door wobble. The Newell Hardware Company was the only manufacturer of cast-iron brackets, which were twice as strong as the wrought steel brackets made by other manufacturers, and their strength and rigidity kept the track longer in alignment. All Newell hangers designed for use on sliding-doors were made with cast-iron wheels, casehardened cold-rolled steel stud and bearings, drop-forged steel pendant, and stamped steel petticoat. No other door hanger manufactured in the United States, in the company's opinion, had such careful and sturdy construction. The executives of the Newell Hardware Company believed that in the making of the Newell line of hangers, brackets, and tracks, the use of the correct steel in the correct place gave the Newell brand of sliding-door hardware longer life, less need of adjustment, and easier installation than any other sliding-door hardware on the market.

Prices of Newell sliding-door hardware were slightly higher than those of competing makes.

The patent on the round trough track had expired in 1897, and in 1926 the Newell Hardware Company had no patent protecting any of the features of its hardware. The hardware was sold under the brand name of Newell. The trade-mark of the company appeared on the side of each piece of track. Although not marked with the trade-mark of the company, the hangers were made in a design which was distinctive with this company.

Hangers, brackets, and track were sold in three ways: each was sold separately, in accordance with individual orders; hangers and brackets were sold in sets in different assortments for standard uses; and hangers, brackets, and track were sold together in boxed sets which included all the hardware necessary for standard types of garage doors. For the latter sets, the company bought the supplementary hardware, such as hinges and bolts, which it did not manufacture itself.

Because a sliding door was more expensive than a hinged door, it was used chiefly in openings so large that a hinged door was impracticable and in smaller openings where a sliding door could save space or was more convenient than a hinged door. The Newell Hardware Company made a different size of track and hanger for each type of sliding door. The two principal uses were for sliding doors for both public and private garages and for freight sheds, warehouses, car barns, and other buildings of a similar nature. Besides these two main divisions of the market, sales also were made for the sliding doors used on elevators, freight cars, subway and trolley cars, and barns.

The executives of the Newell Hardware Company believed that the most promising market for its sliding-door hardware was in garage construction, since an increasing number of garages was being built each year, and since sliding doors had distinct advantages over hinged doors in that they could not be blocked by snow or mud, or banged by wind. Moreover, they could be opened from the inside of the garage and thus protect the person opening them. The use of a sliding door, however, made it necessary that a garage be built 2½ feet longer than if a hinged door were used. The greater expense of sliding doors, therefore, confined their use to the more expensive private garages. The company would obtain certain sales advantages in selling sliding-

door hardware for use on garages, because the cost of complete hardware equipment for sliding doors represented a fairly large unit sale. Furthermore, production and stocking would be simplified if the hardware could be assembled and sold in sets.

While an architect, in the opinion of the executives of the company, was not so important a factor in the sale of sliding-door hardware as a contractor, his specifications carried a great deal of weight. Architects were employed on most high-grade residence and garage constructions which constituted a prospective market for Newell sliding-door hardware. In writing specifications, an architect usually did not include sliding-door hardware in the lump sum provided for general hardware, but made an additional specification for a particular brand of sliding-door hardware or its equal.

Most architects were familiar with the merits of the different brands of sliding-door hardware. Once past experience had proved to an architect the superiority of a particular brand of sliding-door hardware, it was customary for him to limit his specifications to this brand. The worth of any brand was judged by the excellence of its manufacture in comparison with its cost, and by the service rendered by the manufacturer to the architect. An architect would specify the best quality obtainable within the limits of the funds at his disposal. In writing specifications of sliding-door hardware the architect used three sources of information: his file, in which he kept information received from manufacturers; trade publications and catalogs, such as *Sweet's Architectural Catalog,* which listed the products of various manufacturers and were edited especially for the use of architects in specification writing; and engineering advice placed at the service of architects by certain manufacturers.

The executives of the Newell Hardware Company believed that contractors were the most important factor in the purchase of hardware. The brand of sliding-door hardware in most cases was not of sufficient importance to warrant brand insistence on the part of the architect. The specification of a certain brand or its "equal" was merely a means of describing to the contractor the quality which the architect desired to have used. The contractor was then free to supply any brand which measured up to this standard. Furthermore, in the case of large, low-cost buildings, such as public garages and warehouses, the contractor was

the only one to select the brand of hardware. The contractor, like the architect, wished to supply his customer with the highest quality obtainable with the funds at his disposal, but, unlike the architect, his selection was influenced by the margin of profit and by the ease of installation of different brands.

Carpenters, so the executives believed, were the least important purchasers of sliding-door hardware. Carpenters were employed usually in the construction of cheap garages and other low-cost buildings which did not use sliding doors. The executives doubted whether carpenters could be induced to use expensive sliding-door hardware in place of the hinge hardware they generally used.

Consumers, in the opinion of the executives, knew little about the merits of sliding doors and their advantages over hinged doors.

Large hardware wholesalers were the principal distributors of sliding-door hardware. These wholesalers carried stocks and employed salesmen who sold to retailers. Moreover, it was a customary buying habit of the contractor to visit a hardware wholesaler in order to obtain his help in selecting the type of hardware to be used in a particular construction. The hardware wholesaler in these cases either sold to the contractor direct or referred him to a retailer who would be able to supply him with the brand selected.

Because of the bulk and weight of the hardware, its slow stock-turn, and high cost, none but the large hardware retailers catering to the needs of contractors carried it in stock. These retailers carried but one, or possibly two, brands. Small retailers ordered from wholesalers as demand arose.

The sliding-door hardware of the Newell Hardware Company was sold through sales offices in Boston, New York City, and Philadelphia, by two salesmen who traveled from the factory through the Middle West and South, and by three sales agents who had exclusive territories on the Pacific Coast. A few sales to local purchasers were made direct from the factory. The sales offices in Boston and New York City also sold the other products manufactured by the company. The office in Philadelphia sold only sliding-door hardware. Three salesmen were maintained in each of the sales offices: a senior salesman, responsible for the branch, and two junior salesmen who worked under him. All

salesmen were paid on a salary basis; the senior salesmen received between $5,000 and $6,000 a year, while the junior salesmen received between $2,500 and $3,000. Sliding-door hardware was sold mostly by the junior salesmen, who called on hardware wholesalers or retailers. The salesmen helped the retailers to plan installations for contractors, who were the retailers' customers. Salesmen made no missionary calls upon architects.

The Newell Hardware Company had no warehouses connected with its branches. All goods were shipped directly from the factory to the purchaser. The price policy of the company varied according to the size of purchase and the relationship existing between the company and its customer.

The Newell Hardware Company had about 246 customers, including both wholesalers and retailers. Many of these were the leading hardware stores in the communities which they served and had been customers of the company for a great many years. Fifty per cent of these customers were located in New England; 40% in New York, Pennsylvania, and Ohio; and the remaining 10% were scattered through the South, the Middle West, and the Pacific Coast. The average yearly purchases by hardware retailers were $300; the average for wholesalers was $2,000.

One competing manufacturer of sliding-door hardware, so the executives of the company believed, made a majority of the sales of such hardware. This competitor, besides advertising extensively in trade and business papers, did a large volume of sales promotional and missionary work among architects and contractors and also, by means of engineering and warehousing facilities located in the large centers of distribution, rendered all forms of engineering, stocking, and delivery service. Salesmen of this firm kept in close contact with customers. While this company sold to any customer direct, it maintained a rigid policy of price protection to the retailer. Besides this large competitor, there were three other manufacturers of approximately the same size as the Newell Hardware Company. No one of these was particularly aggressive in its sales work, and, although each was strong in its locality, the factories were located in sections far enough removed from the factory of the Newell Hardware Company so that the freight rates prevented them from offering serious competition in the company's territory.

The younger executives of the company wished to advertise

Newell sliding-door hardware in order to increase sales, to meet competition, and to inform the trade of the completeness of the company's line of sliding-door hardware.

One of the older executives of the company, however, disapproved of the use of advertising. This executive believed that the reputation for integrity and high quality which the Newell Hardware Company had built up through the many years it had been in business would result in securing and holding for the company a certain percentage of the total sales of sliding-door hardware and that to advertise would invite stronger competition on the part of the largest competitor which in turn would decrease sales.

The Newell Hardware Company, nevertheless, decided to employ an advertising agency to make a survey of the market for sliding-door hardware and to draw up advertising plans.

This advertising agency conducted an investigation among architects, contractors, hardware wholesalers, hardware retailers, and consumers. The investigation brought out these facts: that among competent judges of hardware the Newell brand of sliding-door hardware was considered to be of the highest quality; that because of this fact and the fact that the company was the pioneer in this market, there existed among hardware wholesalers and retailers, architects, and contractors a considerable amount of latent goodwill toward the company; that the Newell Hardware Company had a reputation in the trade not for conservatism but for lack of aggressive marketing of its products; and that there existed a large potential market for its sliding-door hardware. The sales force of the Newell Hardware Company was adequate to reach these potential customers, but the market was dominated by a competitor who was using every form of marketing strategy with aggressiveness and skill.

Among 74 hardware retailers called on during the investigation, 34 carried the brand of the Newell Hardware Company's chief competitor, 17 carried the brand of the Newell Hardware Company, 10 carried the brand of one of the smaller competitors, and 13 carried miscellaneous brands of local manufacturers. Among 54 large retail hardware stores interviewed, 16 carried but one brand of sliding-door hardware, 31 carried 2 brands or more, and 7 did not carry any sliding-door hardware but ordered as the occasion arose.

An examination of 450 garages showed that 15% were equipped with sliding doors and 85% with hinged doors. In the case of 100 selected garages of expensive construction, 25% had sliding doors.

The investigation among architects, contractors, and hardware retailers brought out the fact that sliding-door hardware was used principally in industrial buildings, such as factories and warehouses; it was used to a less extent in public and private garages; then, in the order of their importance, in public buildings, farms, elevators, churches, office buildings, hotels, and private dwellings.

On the basis of the market investigation the advertising agency drew up a plan for advertising Newell hardware which recommended that the company advertise the use of sliding-door hardware for garage doors only. The specific recommendations of the agency covered the objectives which the advertising was to accomplish; the means of packaging and identifying Newell hardware; a program for advertising to architects, building contractors, hardware wholesalers and retailers, and consumers; and suggestions for sales helps for hardware wholesalers and retailers.

The agency set up the following seven objectives for the advertising to accomplish: (1) to obtain a sales increase of $100,000 in 1926; (2) to provide methods of more adequate sales coverage; (3) to create a wider recognition of the Newell name and trade-mark; (4) to overcome the unfavorable opinion of the advertising and sales methods of the Newell Hardware Company; (5) to influence all classes of purchasers in accordance with their relative importance; (6) to bring about an increased use of sliding doors as well as of the Newell brand of hardware; and (7) to experiment with and demonstrate the possibilities of building up a replacement business among owners of garages with hinged doors.

In order to establish a closer relationship between the product and the advertising, the agency recommended that a new name plate, which it had designed, be placed upon both the track and hangers by decalcomania and that this name plate be featured in every advertisement. Since the sale of Newell sliding-door hardware in packaged sets for garage use offered another means of accomplishing this tie-up, the advertising agency further recommended that the packaging of sliding-door hardware in sets be carried as far as seemed practicable and that special emphasis in the advertising be placed upon these packages.

Following are extracts from the recommendations of the advertising agency.

Architects, Contractors, and Consumers

We are combining the consideration of architects, contractors, and consumers in one section because, in a sense, they are all users or influencing factors in the use of sliding doors and sliding-door hardware. It depends on the individual circumstances as to whether the architect, contractor, or consumer decides the matter, and, in some instances, two or three of them decide the matter. Let us first consider the mediums for reaching these three classes, and then the copy policy.

Architects' Journals

In the architectural paper field, there are a number of different publications available. It would be desirable to advertise in many of them, if you could afford to do so and still reach the other elements that it is necessary to provide for in this plan. But that cannot be done without making the cost too high. Hence, we are limiting our recommendation to what we consider the two chief architectural publications for your purposes, namely, *Architectural Record* and *Pencil Points.*

We recommend *Architectural Record* and *Pencil Points* for six pages each, to run in alternate months, so that you would be appearing in one or the other of these publications during the entire year. *Architectural Record* is scheduled to start in April, 1926, and to run until February, 1927, inclusive, and *Pencil Points* is scheduled to start in May, 1926, and run until March, 1927, inclusive. This is in order to allow for the preparation of copy, and to take care of the closing dates.

The schedule for the architectural publications is $1,695.68

Sweet's Architectural Catalog and *Sweet's Engineering Catalog*

You are already using *Sweet's Architectural Catalog* and are familiar with it, and with the *Engineering Catalog.* There is little that we need add. To take care of the 1926 insertions we are recommending four pages in the *Architectural Catalog,* the same amount that you are now using, and two pages in the *Engineering Catalog* which is issued on April 15 and the forms for which close on February 1, 1926. The schedule amounts to.....$1,121.26

Building Publications

We recommend the two chief building publications, namely *Building Age* and the *American Builder.* Each of these has a circulation of approximately 7,500 copies a month, reaching building contractors and others interested in the building field. In many cases, these building contractors draw up their own plans; that is, an architect does not enter into the situation. Contractors certainly are important in these cases. They are also important where an architect does enter and specify a certain brand "or equal," because they can substitute an "equal" brand.

Also in this case we are recommending six pages in each publication to appear in alternate months, *American Builder,* starting with April, and *Building Age,* starting with May, 1926. The cost of *American Builder* is $320 a page, or $1,920 for the six pages, and for *Building Age,* the cost is $360 a page, or $2,160 for the six pages.

Also, in this general field might be considered the publication *The Carpenter,* which reaches the carpenters in the United States, and has a circulation of 390,000 copies a month. This is the organ of the Carpenter's Union. In many instances, the carpenter is somewhat in the nature of a contractor in door work. He is the one that is usually called in, or would be called in, for changing a hinged-door garage into one with sliding doors. For these reasons, it is desirable to reach the carpenters through this publication, particularly because it has such a wide circulation. We recommend it for the use of six pages at a rate of $375 a page, or a total of $2,250. The schedule amounts to.....$6,201.92

Architects' and Contractors' File Cards

A very effective item for getting your name known to architects and contractors is the file card. These cards contain all the necessary data for the writing of specifications for sliding-door hardware. They are designed to fit the architects' filing system and make this pertinent information quickly available. We are giving at the end of the plan complete specifications for 7,500 of these cards and envelopes. This quantity will be sufficient to reach the architects and contractors in your territory.

House Organ

We recommend a house organ. While we are describing it in this section on architects and contractors, this house organ is also to be mailed to retailers and jobbers. The general function of this house organ is to get the Newell name more known to all the factors as the pioneer in the field of sliding-door hardware, and to convey interesting information either about the Newell line or about sliding doors.

Illustrative of how this can be done is the suggested table of contents for the first issue. This could include an announcement of your new advertising and merchandising policy, a description of your complete sets, a statement about your 750 and 800 items, a reference to the fact that door models can be seen at dealers handling Newell sliding-door hardware, a description of the suggested manual of sliding-door uses and specifications when that is ready, and so forth.

We recommend this house organ to be issued quarterly. For the coming year, the proposed dates are May, August, and November, 1926, and February, 1927.

The specifications and prices for four issues of 15,000 house organs and envelopes are given at the end of the plan.

Test Consumer Advertising

We do not consider it advisable for you to invest any appreciable sum of money in general consumer advertising at this time. We do feel,

however, that it is desirable to make a test of what consumer advertising can accomplish for you, limiting the test to a very small amount of money, and having it tie up with sales work in the New England market. This test is recommended for New England so as to give you a stronger position in that territory and insure a bigger volume of sales than you are now securing. The advertising in any locality is not to be released until sales work is done in that locality, some dealers secured, and some business booked. As part of the scheme, the names of local dealers would be listed in the advertisements. There would also be a coupon which the reader would send to you and ask for further information about sliding doors, and the coupons thus received would be referred to a local dealer.

Another reason for the suggested test is to demonstrate beyond question of a doubt to what degree it is possible to interest people who now have garages with hinged doors, to convert them into sliding doors. This will also be of interest in connection with a proposed selling method taken up in the section on selling activities, and which, if proved practical, would represent a very desirable scheme for a larger business for you.

The test campaign is suggested for Springfield, Pittsfield, and Worcester, Massachusetts; Hartford and New Haven, Connecticut; Providence and Pawtucket, Rhode Island; Portland, Maine; and Manchester, New Hampshire. We are purposely staying out of the Boston newspapers which are relatively high in advertising rates, as we want to keep down the test to a minimum cost.

The suggested schedule is for six advertisements to appear once a week. The first and fourth would be fairly large advertisements of 420 lines each and the other four advertisements would be 70 lines each. The 420-line advertisements are scheduled to appear in preferred position, that is, full position, which means next to and following reading matter. This is in order not to have the smaller advertisements surrounded by other advertisements and thus lose in attention value.

The cost of this advertising would be quite small in most of these cities. Thus, Springfield would cost $178.50 for the entire campaign; Hartford, $107.10, Pittsfield, $58.80.

It is not intended to release this advertising in all these places at one time. The advertising is to be released in any locality only as several good dealers are obtained for stocking the Newell line of sliding-door hardware. And as already stated, the names of these dealers are to appear in the advertisements. In fact, this feature can be made the means, by your sales representatives, of interesting several good local dealers to put in the Newell line. The schedule for this test newspaper advertising and for the nine cities amounts to.....$1,382.02

Copy Policy

Architects, contractors, and consumers represent the determining factors in the selection of type and brand of door hardware to be used on every new or replacement job. For this reason, the fundamental pur-

pose of advertising addressed to any one of these groups is the same. It is to influence these groups to use sliding doors more extensively because of the advantages of sliding doors over hinged doors and thereby to increase the use of Newell sliding-door hardware by making the Newell name generally known as the mark of sliding-door hardware of superior design and construction.

Because architects and contractors are generally familiar with the advantages of sliding doors over hinged doors, this point will only be suggested in copy directed to those groups, and major emphasis will be placed upon the superior design and construction of Newell sliding-door hardware with the purpose of getting architects to specify and contractors to install the Newell brand.

Because consumers in general are not familiar with the advantages of sliding doors over swinging doors, this point will be emphasized in advertising addressed to consumers. In the large consumer newspaper advertisements pictures will contrast sliding and hinged doors. In one, we shall have a snow scene. The large sketch will show a young girl easily sliding her garage door open while the snow is banked outside. In the smaller sketch a man will be shown struggling to get his swinging doors open against the snow.

A headline will then inform the consumer that he can easily turn the swinging doors on his garage into sliding doors that "Roll open and glide shut in any old weather." Similarly sketches of a heavy wind and rain storm in another advertisement will tell the same story. This story will be followed by the story of the superior design and construction of Newell door hardware.

In all three cases, the general method to be used to impress each group with Newell superiority of design and construction is the same. It is to make it generally known that Newell Company invented and is the pioneer manufacturer of the present type of sliding-door hardware; that as a result of this long experience and the constant improvement of the product, the Newell hardware possesses superior features both of design and construction found in no other sliding-door hardware. This might well be termed the theme of the copy policy—to sell Newell hardware on the strength of its many superior features (all of which may be listed in each advertisement) rather than any particular feature. Effort will be made in all advertising addressed to architects and contractors to get distribution for the catalog by providing a coupon which may be filled out and mailed to the Newell Company direct requesting a copy.

In consumer advertising in newspapers as a means of holding the attention of prospects and also of getting a more complete Newell story in their hands, we offer to send them free the story of how the present sliding-door hardware was invented. A coupon to make it easier for all interested prospects to send for the folder will be inserted in the larger newspaper advertisements. This folder will be the same as the folder to be distributed to hardware retailers.

The agency plan at this point called for four advertisements to be prepared for insertion in both architectural and building papers. Each of these advertisements was to be repeated once. Three advertisements were to be prepared for the trade papers, each of which was to be repeated once.

The agency plan continued as follows:

Retailers and Jobbers

Trade Papers

The same consideration applies to the trade papers as applies to the architectural publications; that is, there are a number of these trade papers, and it is not feasible for you to use all of them. After considering all of them, our recommendation is that your advertising be run in *Hardware Age, Good Hardware,* and *Hardware Buyers' Catalog.*

Hardware Age is the leading publication in the field, with a circulation of more than 20,000 copies a week. As it is a weekly, we are recommending it for one page every four weeks, or thirteen pages in all, at a rate of $165 a page, or $2,145 for the schedule.

Good Hardware is a free syndicated publication, but on that account it has a very wide circulation. It reaches the entire hardware field. Its circulation is approximately 45,000 copies. It is a monthly publication, and we are recommending it for a page per issue, or 12 pages, at $200 each, or $2,400 for the year.

Hardware Buyers' Catalog is, in this field, what *Sweet's Architectural Catalog* is in its field. We are recommending it for two pages at a cost of $350.

The entire schedule amounts to.....$4,828.93

Trade-Paper Copy Policy

The fundamental purpose of your advertising addressed to hardware jobbers and dealers is to convince them not only of the superiority of design and construction of Newell sliding-door hardware, but also of the salability of the Newell line. For impressing dealers with the superiority of Newell design and construction the same theme as that previously outlined for architects and contractors is applicable; that is, to make it generally known that the Newell Company invented and is the pioneer manufacturer of the present type of sliding-door hardware, and that as a result of this wealth of experience and constant improvement of the product, Newell sliding-door hardware possesses many superior features both of design and construction. All these features are to be listed in every advertisement.

But in addition, in every advertisement addressed to hardware dealers, your dealer sales aids will be played up and these will be offered free, together with the "Manual." An attempt will be made to get these dealers to mail the coupon for this material.

The advertising done to influence architects and contractors, and thus make Newell more easily salable for the dealer, will be introduced in

some of the trade advertisements. Evidence of the use of Newell material in well-known buildings, or by well-known architects or contractors, can also be given.

Dealer Signs

We recommend a dealer sign of a nature to be rather permanent in the dealer's store. This sign is for the purpose of having something mentioning the name Newell effectively, associating it with sliding-door hardware, and its chief use for garages. This will make an effective item at the point of purchase for this product. We are quoting on a quantity of 5,000. It is contemplated that this sign would be sent only to dealers who are handling Newell sliding-door hardware. When a new account is opened, a sign can be included with the first shipment to that dealer.

Dealer Folder

We recommend a folder to be distributed to dealers. This folder is to have the consumer appeal. It is something that the dealer can distribute to people coming in his store.

The copy would be addressed to the consumer to make him realize the convenience of sliding-door garages. It would then go on to feature the Newell brand of sliding-door hardware, and how comparatively easy and inexpensive a job it is to convert hinged doors into sliding doors. We are quoting on a quantity of 50,000 of these folders. This is on the assumption that you could distribute 100 of these folders to each of 500 dealers. Many of them could be distributed through jobbers.

Jobber Folder

We also recommend a folder to be given to jobbers, which they can enclose in their statements and other correspondence with their retail customers. This folder would, therefore, be written with the dealer appeal. A place is provided for the jobber imprint. The nature of this folder would be largely the same as the trade-paper copy addressed to the dealer, but it would represent an item which you are giving jobbers as a means of cooperating with them in calling the Newell line to the attention of their retail customers. We are quoting on a quantity of 25,000 of these folders on the assumption that you could have 100 jobbers each use 250 of these folders.

Jobber Catalog Insert

We suggest that you prepare a printed insert to be distributed to jobbers for them to use in their own catalogs. This is a simple item, which can be prepared at nominal cost; we are not quoting separately on it.

Manual of Sliding-Door Uses and Specifications

The manual which we have already described is also an important item for the retail and jobbing trade.

Summary of Campaign and Advertising Appropriation

Summary

In this plan we started out by giving you the facts of the investigation. Among the chief points developed were the standing of your leading competitor; the lack of reputation and standing of the Newell Company in comparison with this competitor even though Newell was first in the field; the fact that in the aggregate retailers, jobbers, architects, contractors, builders, and consumers influence the purchase of sliding-door hardware, but to a different degree in varying circumstances; and the chief advertising and merchandising activities practiced by your competitors, as obtained from the trade.

In order to make the plan specific, we have suggested a specific sales objective of $250,000 for the year from April, 1926, to April, 1927. We have made recommendations as to additional sales coverage and advertising methods. We have set down a number of definite policies and a set of objects that the campaign is designed to accomplish, so that all the proposed methods can be checked up as to whether they help accomplish one or more of these objects. Since the more important factors are the trade and architects and contractors, the bulk of the advertising expenditure is for reaching these factors.

With regard to the product, we have recommended sliding-door models for retailers, so that they can in turn show them to architects, contractors, and consumers, the more active merchandising of complete sets, and an improved catalog which will be of value to architects and contractors as well as retailers, to be known as the Manual of Sliding-Door Uses and Specifications.

For influencing architects, we have recommended architectural publications, *Sweet's Architectural Catalog*, architect's file cards, and the house organ. The improved catalog or manual will also be of much interest when it is completed.

For influencing contractors and carpenters who are sometimes contractors on sliding-door jobs, we have recommended the two chief building publications and the carpenter publication known as the *Carpenter*. The file card is also intended for contractors. The house organ will also be addressed to a selected list of contractors. The manual will also apply in this case.

For retailers and jobbers, we have recommended the two leading trade papers, and the *Hardware Buyers' Catalog*.

For material of help to retailers, you would have the improved catalog or manual, a set of folders, the door models, a dealer sign, and the mailings that would be done to architects and contractors in the dealers' territory.

Materials which would help cooperate with the jobbers would be the foregoing retailer material, a jobber's catalog insert, and an envelope insert for the jobber.

In order to stimulate more business in your own market, the New England market, we have suggested a test of newspaper advertising.

In brief, we have provided for influencing every important element that has a bearing on the distribution or purchase of sliding-door hardware in the degree of the relative importance of these factors.

Advertising Appropriation

After assembling all the costs of the different items in this plan, they amount to approximately $27,000. In order to include in your budget the cost of postage and miscellaneous items required, we suggest that you consider a general allowance of $2,000 for these odds and ends. In addition there is required a service fee of $1,200 for our handling of the account. This makes a total advertising appropriation of approximately $30,000.

Is an appropriation of $30,000 practical, in view of the other considerations of your business? To be more specific, what would happen to your business if you went into a $30,000 advertising appropriation and if that appropriation and campaign resulted in your obtaining the sales objective of $250,000?

To answer this question, we took the cost figures as you gave them at our conference. You did not have the costs for the sliding-door hardware segregated as such but you were able to take one of your package sets, number 159x, and you gave us the approximate costs on that item. We have used these as a basis for arriving at an estimated budget based on a volume of $250,000, as follows:

You stated that 159x had a list price of $3.25, that the average discount to the trade was 30%, or 97½ cents, so that you realize $2.275 or, let us say, $2.27. You indicated that the cost of material for this set was 85 cents, or 37%. The cost of labor was 25 cents, or 11%. You estimated that general overhead, factory overhead, and selling expense represented half of 50% of the material and labor costs, which means 24%, but that selling represented 10%, so that overhead would be 14%. Figuring up 37%, 11%, 14%, and 10%, we have a total of 72%. There would be available 28% for net profit, according to these figures, but according to your own operating figures, you mentioned that your net profits were 25%, so that these figures are approximately correct. On the basis of 25% net profit on a sales volume of $150,000, which you have been doing in sliding-door hardware, the net profit would be $37,500 on this department of your business.

Now let us see what would happen by going to $250,000. Let us assume that raw material would still represent 37%, which would amount to $92,500. Let us assume that labor would continue at 11%, or $27,500.

For general and factory overhead at 14%, on $150,000, the amount required was $21,000. But by going to $250,000 the likelihood is that the factory and general overhead expense would not increase very much, in dollars and cents. Let us assume it would go to $25,000, which would make it 10%.

For selling, you formerly figured 10% in general, but you stated that that was really not correct, in that the sales expense on your fire doors

was a good deal higher than on the sliding-door hardware. Since your men in the branch offices operate on a salary basis, anything that increases the volume of sales on the same salary tends to decrease the percentage of selling cost. On that basis, it would appear that, on a volume of $250,000, 7%, or $17,500, for sales expense would be a reasonable figure. In connection with the appointment of local sales agents, some of whom will be jobbers and who will simply purchase the merchandise from you at the regular trade discount, on their business, your selling expense would be very little. The $17,500 would certainly cover the field sales manager, the factory man who covers New York and Pennsylvania, and the proportion of the salaries of your branch office men that you deem fair to assign to the sliding-door hardware line.

The advertising amounts to $30,000, or approximately 12%.

That would leave your net profit at 23%, which, however, on the increased volume of business, would amount to $57,500, as against your net profit of $37,500 on your smaller volume of business. The margin is so favorable that, even if there is a small discrepancy in some of these figures, the available net profit on the bigger volume would still compare favorably with the net profit figure that you are making on the basis of doing only $150,000. We can set the budget up, therefore, as follows:

BUDGET OF COSTS AND PROFIT BASED ON QUOTA OF $250,000

Material	37%	$ 92,500
Labor	11	27,500
General and Factory Overhead	10	25,000
Selling	7	17,500
Advertising	12	30,000
Net Profit	23	57,500
Total	100%	$250,000

Service Agreement and Service Fee

The only thing in addition to that is our requirement of an annual service fee of $1,200, payable $100 per month for the service required in handling your account. Ordinarily, when consumer advertising is embodied in a plan, we handle the advertising on the basis of the commissions that we receive from the publishers. In this case, the amount of work required is so large in proportion to 15% of the trade and professional journal advertising, that we could not afford to handle the account on that basis alone. At the same time, so long as your problem requires this other kind of advertising more than it requires consumer advertising at this time, we are recommending these other advertising methods. But it is necessary for us to have a $1,200 service fee in order to be able to render you the kind of service required.

RÉSUMÉ OF BUDGET

Architectural journal schedule	$ 1,695.68
Sweet's catalogs	1,121.26
Building and carpenter publications	6,201.92
Test newspaper advertising	1,382.02
Estimated art and plate allowance for architects' building publications	1,235.00

Estimated art and plate allowance for newspaper advertisements	620.00
7,500 architects' and contractors' file cards and envelopes	622.00
Four issues each of 15,000 house organs and envelopes	2,768.00
Trade-paper schedule	4,828.93
Estimated art and plate allowance for trade papers	675.00
5,000 dealer signs	1,405.00
50,000 dealer folders	657.00
25,000 jobber folders	529.00
Few salesmen's portfolios	100.00
Total	$23,840.81
Allowance for catalog or manual	3,000.00
Allowance for postage and miscellaneous	2,000.00
Service fee	1,200.00
GRAND TOTAL	$30,040.81

NOTE

All prices on printed matter and engravings in this plan are based on present costs. In case the quotations given by the printers or engravers are changed, we reserve the privilege to submit revised quotations.

The executives of the Newell Hardware Company authorized the execution of the recommendations of the advertising agency. A campaign was launched at a meeting of the sales force of the company in April, 1926.

The six-week test newspaper advertising was ordered for insertion to start on May 20 in Worcester, Providence, and Pawtucket; on May 27 in Manchester and Portland; and on June 2 in Hartford, New Haven, Pittsfield, and Springfield. It was expected that this schedule of insertions would permit the salesmen of the company to visit all hardware retailers before the advertising appeared.

Few inquiries were received as a result of this campaign, and very little interest was shown in it by the retailers. No replacement business resulted so far as the executives could ascertain. The salesmen of the company were unable adequately to cover the cities in which the newspaper schedule was to appear. Although these salesmen were to use the campaign as a means of interesting new accounts, no new accounts were secured.

During the first eight months of professional and trade-paper advertising, 1,117 inquiries were received, a majority of which came from contractors in all parts of the country. The inquiries were turned over to wholesalers and retailers to follow up. Only a few of the inquiries resulted in actual sales. According to reports from the salesmen, the retailers selling Newell hardware were enthusiastic over the advertising which the Newell Hard-

ware Company was carrying on. Although the sales of sliding-door hardware during the first eight months of the advertising increased 9% over sales in the same period of the preceding year, increased sales expense caused a decrease in net profit.

In January, 1927, the executives of the Newell Hardware Company were faced with the problem of whether or not to continue their advertising campaign.

COMMENTARY: The sliding-door hardware of the Newell Hardware Company was suitable for advertising inasmuch as it had features making a strong appeal to selective motives. It is believed, however, that the advertising recommended was not in accordance with the practical needs of the company.

The newspaper campaign to consumers in an attempt to stimulate consumer acceptance on new construction and replacement on existing structures was ill conceived. In any community there would be a limited demand for such hardware at any time for new construction. Hence, advertising for use on new structures would not have had any very large comeback. Moreover, the likelihood of stimulating a replacement demand was small. The expense and the bother involved in substituting a sliding door for a swinging door already installed was so large that few persons would be induced to make a change merely to get the convenience of a sliding door. Furthermore, a "test" campaign carried on in six cities appears to be a considerable test.

As in the advertising of many other industrial products in which numerous individuals play a part in purchase, the company should have attempted to establish the superiority of its sliding-door hardware in the minds of those most influential in specifying purchase. Accordingly, promotional and selling efforts should have been directed primarily at the architect and contractor, with an attempt to secure cooperation in selling efforts on the part of wholesalers and retailers. Although a program was laid out to provide for the stimulation of these various factors in distribution, the expenditures were not in accordance with the practical needs of the company. The use of the carpenter publication, the issuing of house organs, and the large schedules laid out in the various fields were open to question. The company should have adopted a schedule in selected leading publications going to architects and contractors, designed to build a reputation of superiority for Newell sliding hardware. In addition to this industrial paper advertising, it would have been well to provide such file information and engineering service to architects and contractors as would be likely to help them and lead them to specify Newell hardware. In the company's advertising and in its engineering service, however, the garage market alone should not

have been stressed but the suitability of the product for use in the much larger and more important market of industrial building construction should have been established.

Along with any advertising and promotional efforts, well directed and well coordinated personal selling efforts were necessary. These were apparently absent in the carrying out of the program that was undertaken.

February, 1928 N. H. B.

Eldon Manufacturing Company[1]

MANUFACTURER—JEWELRY BOXES

Sales Promotion—*Advertising to Consumers* vs. *Personal Sales Work With Retailers.* The company wished to increase the sales of its jewelry boxes to retailers. It considered two plans: one called for an extensive national advertising campaign to consumers; the other called for educational work to be done among retail jewelers by the company's salesmen, who would be given a special training course for that purpose.

(1925)

In the spring of 1925 the Eldon Manufacturing Company decided to attempt to increase its sales of jewelry boxes, but was undecided what advertising and selling methods would be most effective.

The company was organized about 1880 to manufacture boxes to be used for the packing and display of jewelry and had grown steadily until it was one of the leading manufacturers in its field. As the company had expanded, it had introduced other lines of paper products, until in 1925 it had five manufacturing divisions: boxes, cases, and findings for jewelry; shipping and marking tags; gummed labels, wax, and other adhesives; crepe paper products; and special merchandise for holidays, such as seals, tags, and cards. The merchandise manager of the box division of the Eldon Manufacturing Company believed that it was not possible to produce finer jewelry boxes than those manufactured by the company. The retail prices of these boxes varied from 3 cents, for machine-made boxes, to $5, for handmade cases.

By means of national advertising, the name Eldon had become associated with all sorts of paper products, but, in the opinion of the merchandise manager, the emphasis placed by the advertising upon the company's other products had led to a failure fully to develop sales of the jewelry boxes, and as a result many people did not know that the company had had years of experience in the manufacture of fine jewelry boxes. Some executives had concluded that the company could increase its sales and goodwill if it informed jewelers, to whom it sold directly, and the buying public of the fine workmanship of Eldon boxes.

[1] Fictitious name.

The only advertising of its jewelry boxes that the company had done had been in a house organ, which it issued quarterly and distributed to 10,000 jewelers who were customers or prospective customers; in two trade magazines, *Keystone,* a monthly magazine, and *Jewelers' Circular,* a weekly, in which it had taken a small space for over 20 years; and in programs at jewelers' conventions. The cost of each issue of the house organ was approximately $1,000, and the cost of the trade-paper advertising varied from $200 to $300 a year. The merchandise manager believed that this advertising had not been effective and consequently he did not advocate increasing the space used in these mediums. The company deemed it necessary to continue placing small advertisements in these trade papers to keep the goodwill of retailers, who expected such a large manufacturer of jewelry boxes to advertise. The company's competitors were thought to use the same mediums for similar reasons. To promote sales, the company was considering two alternatives: a campaign of national advertising, and educational work conducted by salesmen and backed by the house organ sent to jewelers.

The Eldon Manufacturing Company estimated that there were approximately 32,000 jewelers in the United States, of whom 10,000 were good accounts; of these only 8,000 were its customers. The company rated retailers according to the size of their businesses and the quality of merchandise they carried. Tiffany & Company represented the highest rating, or 100; other jewelers were rated downwards. A majority of its 8,000 customers had ratings between 70 and 90; only a small percentage were rated from 90 to 100.

The company had six important competitors who made jewelry boxes. While these manufacturers produced boxes of various qualities, Eldon boxes generally were believed to be superior. The Eldon Manufacturing Company made 25% of the total sales of jewelry boxes to retail jewelers; the six competitors made 50% of the sales; and wholesalers made the remaining 25%. Wholesalers purchased jewelry boxes principally from European sources; their purchases from American manufacturers represented only a negligible part of each manufacturer's output. Since a few large jewelers, like Tiffany & Company, manufactured their own boxes and since most of the companies with ratings from 90 to 100 were so large that they could shop for their boxes and

obtain price concessions greater than those which the Eldon Manufacturing Company was willing to offer, the jewelers with credit ratings between 70 and 90 represented the group to which the company wished to increase its sales.

Since the company received approximately the same margin of profit on the various lines of jewelry boxes, there was no one line on which it would put special sales effort. The company anticipated no production problems if it increased sales, provided the increase in sales of any one line was not too rapid.

One sales executive believed that the most satisfactory way both to secure the retailers' goodwill and to increase sales of jewelry boxes was through a national campaign of educational advertising. Such advertising would stress the desirability of having fine jewelry appear at its best by being placed in fine boxes. He proposed to set $50,000 as a minimum advertising appropriation to be expended each year for five years. This appropriation amounted to about 3% of sales of jewelry boxes in 1924. The advertising manager was convinced of the cumulative effectiveness of advertising. He recommended that the appropriation be used for advertising in the *Ladies' Home Journal,* the *Woman's Home Companion,* and *Good Housekeeping,* which were read almost entirely by women, rather than in the *Saturday Evening Post,* which had a mixed circulation. He would rely upon such a program to accomplish two objects: to lead consumers to demand fine boxes for their jewelry, and to influence retail jewelers to use more and better boxes and to buy these from the Eldon Manufacturing Company. Since jewelers included the cost of jewelry boxes as part of their selling expense and did not pass on the additional cost of better boxes to consumers, the company would have to overcome considerable sales resistance in order to achieve the second objective.

The merchandise manager, on the other hand, favored the concentration of all efforts upon educating jewelers to the use of better boxes through sales promotion on the part of salesmen and by increasing the number of issues of the house organ from 4 a year to 6. The company employed 350 salesmen, of whom 150 sold jewelry boxes along with other products. Twenty-five salesmen sold only jewelry boxes to jewelers in large cities. The company needed a sales organization of 350 salesmen in order to sell the great variety of products that it manufactured; the

sales of jewelry boxes in the past had amounted to only one-eighth of the total sales. It seemed to the merchandise manager that these salesmen should be able to obtain larger orders for jewelry boxes without interfering with the sale of the other products. In the past, about one-third of the space in the house organ had been devoted to Eldon products; the rest had been taken by a discussion of merchandising methods which would be helpful to jewelers. From time to time, however, the company had attempted to impress upon jewelers the value of the advantageous use and display of jewelry boxes. The following quotation from the house organ is representative of this type of advertising.

ANOTHER JEWELER SELLS HIS PACKAGING

The advertisement below shows what an Indianapolis jeweler thinks of his package. He realizes, and the comments of his customers prove the correctness of his theory, that a proper setting for the article is necessary.

Now, having the proper setting does not always mean an expensive setting. It means that the box or case should be in keeping with the articles sold. Placing the inexpensive gold baby ring in a fine leather ring box is like filling the living room of a summer cottage with an overstuffed parlor suite.

The little ring should go in a fine white paper box, which symbolizes quality quite as much in its way as the fine leather case. But, when the exceptional sale of the day is made, the expensive engagement ring, with a radiant diamond in a chased platinum setting, then jewelers like Mr. Sanderson have the proper fine velvet or leather case in which to place the ring.

And the young lady appreciates it. She knows subconsciously a fine case when she sees one.

Shall your gift be presented in a beautiful gift case, bearing that synonym for artistic elegance and guaranty of quality—the name of J. C. Sanderson?
A beautiful new store, new stock, new designs, and, best of all, the same modest prices that since 1884 have attracted gift seekers from all parts of Indiana.

Diamonds, Precious Gems,
Watches, Silver
J. C. SANDERSON
Second Floor, Merchants Bank Bldg.
Meridian and Washington

The merchandise manager believed that the expense of selling jewelry boxes had been too high and was convinced that the sales-

men were capable of at least doubling their sales of these goods. In order to accomplish this end, he proposed that the company give the salesmen an intensive training course of probably a month's duration. He estimated that the cost of this training would be lower than the proposed appropriation for national advertising. Although he admitted that a national campaign of educational advertising would do much to break down sales resistance and would assist salesmen materially in educating jewelers, he believed that a course of educational training for salesmen was fundamentally essential. He was convinced that an advertising campaign was not necessary.

COMMENTARY: The company should not have carried on a program of consumer advertising for its jewelry boxes. In the purchase of jewelry the box probably appears to the average purchaser as an incidental to his purchase. While it is true that he prefers to have his purchase well packaged, he has come to look upon the package as a part of the service given by the jeweler. Accordingly, the company had an indefinite objective and weak motives to which to appeal in advertising jewelry boxes to consumers. It is doubtful whether jewelers would have been friendly towards an attempt to persuade the public to demand high-grade boxes for which the jewelers had to pay. The company's problem was one of showing jewelers wherein the use of attractive boxes might tend to strengthen patronage of customers. Such education could best be carried on through the company's salesmen and through such a house organ as the company was publishing.

February, 1928 N. H. B.

Manly Elastic Company[1]

MANUFACTURER—RUBBER WEBBING

Advertising—*Use of Consumer Advertising for Fabricating Part.* The company, a manufacturer of elastic goods and webbings, developed a special webbing to be used in the top of men's trousers to hold the shirt and trousers in place. The company wished to sell the product primarily to manufacturers of men's clothing. Upon the advice of an advertising agency, the company not only conducted an extensive campaign in trade papers but also advertised extensively to consumers and retailers, in order to create a demand that would influence the manufacturers to buy. This program proved unsatisfactory.

(1926)

In November, 1926, the executives of the Manly Elastic Company considered revision of selling and advertising plans for the product "Shirtsmooth," a patented webbing.

The Manly Elastic Company's plants were located in New York City and Cleveland. Total annual sales from 1920 to 1926 varied between $3,000,000 and $6,000,000. The principal products manufactured by the company were cotton and silk elastic goods and webbing of every description. The company sold most of its products directly to manufacturers. It had advertised several of its products in trade papers prior to 1926, but had not used consumer advertising for any of them.

In 1924 the idea was conceived of manufacturing cotton webbing with strands of exposed rubber woven through it to be used in men's trousers as the curtain, the strip of fabric that goes around the top of the trousers inside. The exposed rubber strands were to provide friction to keep the trousers and the shirt from slipping. Thus, such a fabric would serve to keep the shirt from working out and would tend to keep the trousers snug and neat at the waist.

Such a product was finally devised and manufactured by the company under the registered name "Shirtsmooth." Officers of the company and their friends who tried the product found it satisfactory. As Shirtsmooth could be used in every pair of trousers, there appeared to be a wide market for it. Besides

[1] Fictitious name.

registering the trade name, the company also applied for general patents covering the product. The company was prepared to market Shirtsmooth in quantity early in 1926.

In the years subsequent to 1920 the company had experienced extreme competition for its regular lines of products. Production capacity in the elastic webbing industry had been greatly expanded during the World War and in the period just subsequent. After 1920, a limited demand for the company's products had brought about a condition wherein the factories were not operating nearly to capacity. For several years the company had not been able to operate at a profit. Although in the latter part of 1925 the company was in a sound condition financially, the executives were especially desirous of building up a demand which would enable its factories to operate nearer capacity in order that it might show a profit for its stockholders. Executives desired, therefore, to introduce and secure wide distribution of Shirtsmooth as soon as possible in order to increase manufacturing operations.

It was decided that the sales manager and six of the company's eight salesmen should devote a large part of their time during the latter part of 1925 and during 1926 to the introduction of Shirtsmooth. The plan was to sell the product to the tailoring trade through wholesalers who covered the entire United States, and directly to manufacturers of clothing and sporting goods. Packages of Shirtsmooth containing enough to equip a single pair of trousers would be made available to consumers through retail clothing stores and department stores. The Shirtsmooth to be sold to consumers was narrower than that sold to tailors and clothing manufacturers and was meant to be sewed onto the trouser curtains ordinarily used, whereas the wider Shirtsmooth when used by manufacturers served as the curtain itself. Counter containers, containing a dozen or more packages of the narrow Shirtsmooth, were to be made available to the retail trade through wholesalers. The company's main interest was in selling to clothing manufacturers, for therein rested a large volume of business, provided large clothing manufacturers adopted Shirtsmooth for inclusion in their clothing.

The salesmen who first interviewed manufacturers reported that, although the manufacturers were interested in the product, they hesitated to adopt it because of the expense involved. It was

estimated that it would cost the clothing manufacturers from 10 cents to 15 cents more to equip one pair of trousers with Shirtsmooth than with the usual curtain. On total output this meant to clothing manufacturers a fairly large sum which they did not believe they could get back in prices charged to retailers. Several of the clothing manufacturers would have been more interested in the product if they could have secured the exclusive right to use it. The company, however, had decided not to limit its market by giving the exclusive right to use Shirtsmooth to any one clothing manufacturer.

Although wholesalers were willing to handle the product, they showed no disposition aggressively to sell it to the tailoring trade or to retailers. The wholesalers reported that the tailoring trade and retailers did not readily purchase the product.

An advertising agency, which was consulted late in 1925 concerning marketing and advertising plans, after a study submitted the following recommendations:

REPORT AND RECOMMENDATIONS OF THE ——— AGENCY FOR MANLY SHIRTSMOOTH SALES AND ADVERTISING

Introduction

In the last decade many articles of human necessity have come to the fore that previously had experienced little or no distinction. By the discovery of some minor improvement, a new use, or refinement, particular articles have been popularized by the masses. Their future success is assured until time brings pressure to bear on some now unknown displacing factor. Contemporary notable illustrations which have had an origin based on what was at first an insignificant detail are Fuller Brushes, Bradley Knit Wear, the Parker Pen, Jantzen Bathing Suits, B.V.D.'s, and Holeproof Hosiery.

Hardware and department stores and the street peddler once possessed a monopoly in the retail brush market. The Fuller Company had sufficient courage in its conviction that high-grade brushes could be made for specific purposes, and sold for these uses because they were able to do what no other brushes did and accomplish their work in a better way. Of course, Fuller brushes commanded a higher price. Waterman used to be synonymous with Fountain Pen. Today the Parker Pen has ridden to the front on a Scarlet Tanager Red, a comfortable grip, and a generous ink capacity, and the Parker is the most expensive popular pen in the field. Jantzen Swimming Suits, B.V.D.'s, and Holeproof Hosiery owe their initial success to better fit, more comfort and freedom, and an original style. Each of these three has from the start been sold at a higher price than people were accustomed to pay for some article serving a similar purpose.

The deduction from such successes as the foregoing is that a feature, no matter how seemingly trivial, if it eventually is recognized as adding to the enjoyment, convenience, or comfort of American daily life, will be unhesitatingly adopted along with the article possessing this desirable feature. In this class we place Manly Shirtsmooth. It has the requisite distinctive usefulness for national acceptance.

Some Similar Successes

The only difference between the trade-marked articles just mentioned and Manly Shirtsmooth is that Shirtsmooth is not a whole unit in itself, but an attachment to a finished article now in use. Nevertheless, the analogy holds good because Shirtsmooth adds the touch of perfection and completeness to trousers, which have hitherto labored under the handicap of poor fit at the waistband.

The men's and boys' clothing trade offers several illustrations of patented attachments which have been successful. Among them may be cited the Bartel Pocket, the Brown Method (adjustable waistband), 'Conomy Muffler, Governor Fastener, Knitgrip Knicker, and Eagle Cap.

Of these mentioned the Bartel Pocket represents the greatest commercial success, mainly due to the courage of its promoters to use consumer advertising in a national way, thus forcing manufacturers to adopt it. A patent invisible pleat inside the pocket prevents the pocket from sagging, no matter to what rough usage it is subjected, nor how much is put into it.

Investigation Proves Two Things

The investigation we have conducted at your request among manufacturers, wholesalers, retailers, and consumers of men's and boys' clothing has proved two very definite things concerning Shirtsmooth—

FIRST: Its application to all kinds of trousers is quite practical of accomplishment and desirable from the wearer's viewpoint.

SECOND: The principal resistance will be encountered from the manufacturers and wholesalers, who will not add a patented feature to their present lines at an extra cost until forced to do so.

There is nothing unusual about such a situation. It inevitably occurs with a new invention applicable to some article of standard use —whether its aim is to increase or enhance the convenience, comfort, security, safety, or appearance of the article to which it is to be applied. This conservatism of the established order always has to be encountered, even when the adoption of the new thing represents more progress and greater profits.

You may look for a reasonable amount of cooperation from the retailer, who is always glad to secure an additional selling point, provided its cost is negligible—or at least reasonable. As for the consumer, his resistance should not be hard to overcome. You are not engaged in the difficult work of changing any of his habits or customs,

but rather following the easier lines of adding to his comfort and neatness of appearance. Nevertheless, you can hope for no universal demand for Shirtsmooth until you have aligned both of these factors on your side—retailer and consumer.

Our research has shown a marked interest in Shirtsmooth at first on the part of the manufacturer, speedily followed by apathy when he learns the cost—and the fact that he cannot secure the exclusive rights. It is hopeless to assume that he will take it up voluntarily and promote its use.

His apathy, however, will change immediately he is given a practical demonstration of a demand from his customers—the retailers, who in turn will feel the pressure when exerted by their customers.

The Market

The United States Census Bureau figures indicate that the number of men's and boys' trousers manufactured this year will approximate 50,000,000. This does not include custom-made clothing or the tailor-to-the-trade output—all of which may safely be computed at a figure equal to half the ready-mades. That gives us a total of 75,000,000—a figure we have carefully checked with authorities in the ready-to-wear and custom-made clothing trades.

Granted that there are 75,000,000 pairs of trousers sold annually in this country, here is a tremendous potential market for Shirtsmooth. At least one yard of trouser curtaining is required per pair, and if Shirtsmooth becomes a part of the "Standard Equipment" you may look for a production of 75,000,000 yards.

It is reasonable, however, to set a much more conservative objective. You would be satisfied if in the first year you could capture 7% of the market, which would call for 5,250,000 yards of Shirtsmooth. At 10 cents a yard your sales would be $525,000.

You have figured your manufacturing costs, raw material, and so forth, in the price of 10 cents but that leaves you nothing for advertising costs. Say you were to add 2 cents a yard for this purpose, this would give you an appropriation of $105,000—a fair figure, being 16 2/3% of your sales. Some concerns allow 20% or more for the first year to establish a product. As the volume of production increases, naturally the ratio of advertising expense decreases.

Having a monopoly on Shirtsmooth you are at liberty to fix your own price. It should be made as low as possible in order to create a minimum of resistance and open up the largest possible market, but you have no such restriction in dealing with high-grade merchant tailors and manufacturers where cost is not the principal consideration. A de luxe Shirtsmooth in such a case is quite a desirable thing.

Trade Campaign Inadequate

Upward of a month ago we recommended that you undertake an intensified campaign to the manufacturing and retail men's and boys' wear trade as the best means of establishing Shirtsmooth quickly with the trade. We still believe this course necessary, but our continued

investigation since then convinces us that a trade campaign will be inadequate to attain your present objective, namely, 5,250,000 yards. This will call for the bold use of space in consumer publications, the preparation of dealer helps, such as counter cards, folders, and so forth.

Our investigation all tends to strengthen the conviction that you have a very real proposition which you must get behind with energy and aggressiveness if it is to be put over.

The opportunity you have long desired is now presented in Shirtsmooth. It affords you the way of presenting an easily identified, trademarked, exclusive Manly product to the trade and consumer. All this advertising effort will redound to the credit of your concern generally—will help establish your name with the public, and make more smooth the pathway for presenting other new Manly products from time to time—and can be made to help stimulate the sale of the whole present Manly line.

Distribution and Trade Advertising

Your biggest outlet will be through the men's and boys' ready-to-wear trade. This offers the best opportunity at present, and attention should be concentrated thereon. It will be possible, however, to develop your secondary market—the men's custom tailors—at the same time and with very little additional cost.

Through your present selling force, increased perhaps by the addition of several experienced men to be placed in the big ready-to-wear manufacturing centers—Rochester, Baltimore, Chicago, Boston, and New York—you will start a drive for the sale of Shirtsmooth.

Instead, however, of going to the manufacturers to sell them yardage of Shirtsmooth, you will sell them your complete merchandising plan. You will be able to show them how it will be to their advantage to include Shirtsmooth in their new lines of clothing. You will show them a portfolio containing proofs of your advertising to trade and consumer, your folders, show cards, and so forth; in short, you will disclose your plans for creating an actual consumer demand.

Your trade-paper advertising may be commenced at once. It is true that most of the manufacturers have opened their spring lines now, but the present practice of retail clothiers is to place only a small part of their requirements this far in advance of the season. They buy very close to the season. With rare exceptions, manufacturers do not make up stock in advance. They wait for actual orders to be placed. And then the retailers must wait until their goods are made up—usually just prior to the season's opening, or, if the weather is unseasonable, some time after the opening. The retailers are averse to tying up their capital in stock months ahead of the season, as was their practice before postwar inflation upset many of the old merchandising customs.

This changed condition works to your advantage. The time element does not figure as a factor. You may present Shirtsmooth to the trade whenever you are ready.

All of the trade advertising will be designed to acquaint manufacturers and distributors with the fact that a revolution has occurred in men's clothing, making for improved personal appearance and, consequently, more satisfied customers. It will carry a coupon, offering to send sufficient Shirtsmooth to equip one pair of trousers for 10 cents or 15 cents. Such inquiries should be encouraged from all branches of the trade during the present pioneering period. The idea is to get it into as many hands as possible. A nominal charge should be made for samples for several reasons:

FIRST: It discourages those who act purely from idle curiosity.

SECOND: It makes the inquirer attach more importance to the transaction. Having paid for the sample, he will want to put it to use. If it were free, he might not even take the trouble to apply it to a pair of trousers.

THIRD: It helps pay for the mailing, postage, material—and is good business.

Free samples, however, should be sent to the list of 2,222 manufacturers of men's and boys' clothing who are estimated to be worth $5,000 or over. Reprints of your advertising should also be mailed. In fact, a regular follow-up campaign to keep them familiarized with all the developments is advisable. This would constitute an important part of your sales work, for it is manifestly impossible for you to call personally and solicit the business of any but the larger, more important manufacturers. Yet you want as large a percentage as possible to adopt Shirtsmooth.

A similar course of action should be pursued with regard to the jobbers of tailors' trimmings. Quite a large part of the new business you open up will doubtless be through the cooperation of these jobbers. They now supply the trouser curtaining used by all except the very large clothing manufacturers. One of these jobbers, for instance, tells us he sells from 6,000,000 to 7,000,000 yards annually.

Trade Mediums

You can illuminate the whole trade by concentrating in the Fairchild publications—the acknowledged leaders of the field. You would use the *Daily News Record* for your opening smash, followed by a consistent campaign in the *Men's Wear—Chicago Apparel Gazette* throughout the year.

The *Daily News Record* is a daily trade newspaper with 15,000 circulation, of which 5,000 are the country's most progressive and aggressive retailers of men's and boys' wear, and the other 10,000 are manufacturers and jobbers in these lines and related textile trades.

Men's Wear—Chicago Apparel Gazette is a trade magazine published twice a month, having a circulation of 13,000 which gives complete coverage of the worth-while retailers.

We recommend the following schedule for the trade papers:

DAILY NEWS RECORD

1,505 lines (5 columns) 6 times at 20 cents a line	$ 1,806.00	
600 " (¼ page) 8 " " 20 " " "	960.00	
		$ 2,766.00
The foregoing advertising would run through November. A similar schedule should be repeated next spring before the opening of the new season.		
Cost of repeating	2,766.00	
Rate holder to obtain lowest rate, 1 inch 303 times at 20 cents a line	848.40	
		$ 6,380.40

MEN'S WEAR—CHICAGO APPAREL GAZETTE

Double-page spreads each issue for one year (24 issues)	$4,838.40	
Short rate saved by using old contract	360.00	4,478.40
Total		$10,858.80

Custom Tailoring Trade

Coincident with your work to interest the manufacturing and retail trade in men's and boys' clothes, you will develop the men's custom tailors.

The high-class tailors can be reached through the *Sartorial Art Journal* and *American Tailor and Cutter* and the tailors' own organ, the *International Tailor,* while the smaller neighborhood merchants can be appealed to through the *Progressive Tailor,* which is published semi-monthly by the big woolen combine—Detmer-Bruner-Mason.

We recommend the following schedule:

SARTORIAL ART JOURNAL AND AMERICAN TAILOR AND CUTTER

9 pages, including semiannual issues in February and September, at $60	$ 540.00

INTERNATIONAL TAILOR

10 pages, 1 page in each of their issues, at $35	350.00

PROGRESSIVE TAILOR

1 page in each of their two issues, special position facing title page, at $250	500.00
Total	$1,390.00

You should also carry on a direct-mail campaign to the tailors, sending samples, folders, and reprints of advertisements—concentrating on the 2,774 tailors estimated to be worth $10,000 or over. This number should be supplemented by the 318 tailors-to-the-trade.

It would seem advisable to utilize your poster advertising contract in New York, which has another year to run, for further effort on Shirtsmooth. This would strengthen your efforts in the New York market, add further weight to your trade and consumer campaigns, and put to a definite and valuable use space which has heretofore been devoted to your boxed goods line for lack of something definite to exploit.

Consumer Advertising

In advertising Shirtsmooth to the consumer we must accomplish three things:

1. Reach the largest number of men who could and would wear Shirtsmooth;
2. Reach a proportionally large number of women who influence the purchase of men's and boys' clothing;
3. Exert an influence on the manufacturing and retailing trades.

According to the government census there are 66,000,000 males in this country, all of whom, except about 10%, infants under three years, are prospective users of Shirtsmooth. There are then 60,000,000 persons who could use Shirtsmooth, but we are after only 7% of our possible market at present, namely 4,200,000 males, who wear 5,250,000 yards of trouser curtaining.

In reaching this great market, we are confronted, first with the method of approach and, secondly, with a selection of the mediums through which this approach can best be made. The copy and presentation must be educational, for both men and women, and yet we feel that purely educational copy alone will not suffice to secure worth-while results in one year's time.

In order to add to the educational side of our advertising and as a means of securing interest, conversational activity, and a desire to use Shirtsmooth, we recommend the use of a coupon in all consumer advertising and the development of a sample offer (1 yard—enough for the ordinary pair of trousers) for 10 cents. Considerable stress must be placed upon this coupon, in order to secure the largest possible number of returns, as each sample sent out will be the basis of mouth-to-mouth advertising and a strong stimulant to the otherwise educational method of approach.

In the selection of mediums we are confronted with two factors:

1. Consumer interest and response;
2. Influence on the manufacturer and the trade.

We believe that more than one medium is necessary in order to combine to best possible advantage these two objectives. There is one medium which covers both quite satisfactorily—the *Saturday Evening Post*—and it is upon the use of this great weekly that our consumer campaign is based.

This magazine, with its circulation of 2,500,000, touches the lives of, and wields a power with, no less than 10,000,000 people. Its readers are almost evenly divided with regard to sex. It gives us the concentrated circulation we require—well distributed all over the country. It exerts great influence with the manufacturer and the trade, combin-

ing, as does no other medium, consumer and trade influence, both of which are essential to the success of Shirtsmooth. The use of a coupon in the *Saturday Evening Post* will secure some response from readers and add weight to manufacturer and trade pressure, but it will not, in our opinion, bring sufficient returns in this medium alone to provide the interest and activity necessary to the success of an emphasized coupon introduction.

The *Saturday Evening Post* is made the basis of our campaign for its tremendous consumer and trade influence—and not as a mail-order medium.

We recommend the following schedule in the *Saturday Evening Post:*

3 pages	$22,500.00
2 half pages	7,500.00
10 quarter pages	18,750.00
Total	$48,750.00

The opening announcement should consist of a full page in January—followed by a second full page in February. We then advise dropping to a half page and quarters for the first half of the year. The campaign for this first half would be:

January	1	page
February	1½	pages
March	2	quarter pages
April	2	quarter pages
May	2	quarter pages

June and July being vacation months, it will not be necessary to advertise at that time. The advertising would be resumed late in August when the retailers begin to get ready for the new fall season. A quarter page would be run then, followed with large space again in September. The effort for the latter half of the year would be divided as follows:

August	1	quarter page
September	1½	pages
October	2	quarter pages
November	1	quarter page
December	1	quarter page

In addition to our combined effort for consumer and trade acceptance in the *Saturday Evening Post,* we recognize the necessity of greater coupon return and the use of other magazines more adapted to this purpose. Here we enter the women's field almost exclusively, as the use of coupons is the influence behind most comparable purchases for both men and boys. Shirtsmooth can be very largely introduced to men and boys through women—and the securing of requests for samples from women readers should not be difficult. In such cases, the women themselves could be prevailed upon to sew in Shirtsmooth, or turn it over to the neighborhood tailor. Thus talk is started, a trial secured,

and, granted actual merit, which of course we take for granted, acceptance and cooperation are much more quickly and freely obtained.

In the selection of mediums in the women's field, it seems wise to use a limited number of proved worth. After careful study, we have selected three: *Good Housekeeping,* with a circulation of 1,150,967; *Ladies' Home Journal,* with a circulation of 2,385,403; and *Woman's Home Companion,* with a circulation of 1,902,091, giving a total circulation of 5,438,461. In these three magazines we recommend the use of single columns, with the coupon strongly emphasized, for the following schedule:

Ladies' Home Journal—1 column, 1 insertion	$ 2,250.00
Good Housekeeping—1 column, 1 insertion	1,275.00
Woman's Home Companion—1 column, 1 insertion	1,900.00
	$ 5,425.00
Four insertions, during the months of March, April, May, and September, at $5,425	$21,700.00

Summary

Summarizing the costs for the entire campaign, we submit the following recommendation for appropriation and procedure:

Trade advertising	$10,858.80
Custom tailor advertising	1,390.00
Consumer advertising	70,450.00
Dealer helps, folders and direct-mail effort (approximate allowance)	9,700.00
Art work, plates, etc. (approximate allowance)	6,000.00
Total	$98,398.80

We have sketched here briefly the possibilities for Shirtsmooth and how to create acceptance and demand through the use of advertising. Frankly, the success of your new product is contingent upon such an advertising effort, plus selling effort. With the help of advertising, Shirtsmooth can secure acceptance on the part of the consumer, the retailer, the jobber, and the manufacturer. Without advertising, it will never get far, will probably never even get started; or if it were to start, it would die out within a season, as so many other things have done that lacked sustained promotion.

This advertising, of course, must be supported by your selling effort. Your sales force must be "sold" on Shirtsmooth before it can sell Shirtsmooth to the distributing trades. Your portfolio of advertising work will do more than anything else to arouse the salesmen's enthusiasm. You will then have selling and advertising hitched in double harness—working to increase the volume of production for Shirtsmooth.

The officers of the Manly Elastic Company ordered the agency to start the advertising to the trade but hesitated to adopt the broad advertising campaign outlined by the agency because of

the uncertainty of success. It was pointed out at the time that although practically everyone needed Shirtsmooth in his trousers, nevertheless it was an "unthought of" need, and considerable educational advertising would be necessary to make men realize their need for Shirtsmooth. While deliberating whether or not to adopt the advertising plans, the executives received the following letter from the agency in January, 1926.

Manly Elastic Company
Gentlemen:

You will recall that in December you instructed us to proceed with the trade advertising and direct-mail work for Shirtsmooth and at the same time to prepare the plates for the *Saturday Evening Post,* but not to reserve space pending the receipt of definite instructions from you.

All this work has now been finished. The major effort has been concentrated in the first six months, for this we regard as the crucial period in the introduction of Shirtsmooth to trade and consumer. All the preliminary work has been completed to see this advertising through the first half of the year—art work, plates, composition, and so forth.

Reviewing the situation, we find that it is just a little over one month since the first advertising announcement was made to the trade in behalf of Shirtsmooth. During this month a great deal of activity has been created, many inquiries have been received, and the campaign is quite well advanced—as far as we could reasonably hope to expect in such a short time. We have an educational process to go through in bringing all the factors of the trade to the realization of what Shirtsmooth is and to break down the resistance there naturally would arise against it. We figured right along that this educational work would be used as a lever to start swinging the trade around to Shirtsmooth, relying however upon the *Saturday Evening Post* for our main effort with both trade and consumer. Frankly, we believe you will never obtain your objective unless the original plan of using the *Saturday Evening Post* is adhered to—that is, unless you have sufficient conviction in the merits of Shirtsmooth to go to the consumer with a strong campaign in its behalf.

The trade is interested, and you are getting a great many nibbles, but it is quite certain that you will never land any of the big ready-to-wear clothing manufacturers until they have real evidence that you are going to the consuming public with your story on Shirtsmooth.

We are still of the opinion expressed in our recommendations to you that "your biggest outlet will be through the men's and boys' ready-to-wear trade." Now these manufacturers are independent and they wish to maintain their independence. They do not want anything or anybody to interfere with their present methods of running business, nor

do they wish to add something to the cost of production which they have already figured to meet their competitor's price. But they are forced to give a respectful hearing to anything that you have to sell them if you can go out and, speaking in the vernacular, "holler loud enough about it."

Your advertising and selling force are doing this. They are getting the Shirtsmooth story before the proper audience. All factors in the trade now know about Shirtsmooth. You are slowly selling them on why they should accept Shirtsmooth. We never believed you could accomplish this task in a month.

Why, if you were selling $5 gold pieces for a nickel, you would have a hard fight on your hands. You wouldn't find buyers getting excited and storming at your doors for the gold pieces unless you first got excited yourself and set out to tell the world about it. Everything that has happened since this work commenced has strengthened our conviction on two points:

FIRST—That Shirtsmooth is a good product and will do all that is claimed for it;
SECOND—That Shirtsmooth is destined to be a great success, and will be adopted universally.

But everything depends on your attitude. You must show the utmost confidence in your product and an unflinching determination to put it over. If you do not deviate from your policy, you will enjoy the satisfaction of making the success that Shirtsmooth deserves. This means you must carry through your vigorous, bold campaign as planned, waiting patiently while your forces of advertising and selling are slowly but surely bringing your objective into clearer view.

In conclusion we cannot urge too strongly that you give a release for the *Saturday Evening Post* advertising, so that it may be commenced before it is too late in the spring. This was originally intended to have a strong effect on the manufacturers, who are making up their lines for the new season. You, therefore, will not be simply losing valuable time by further delay, but may jeopardize the success of Shirtsmooth for the whole year. Very truly yours,

President.

The officers of the Manly Elastic Company finally decided to adopt, with minor changes, the advertising plan submitted by the agency. The advertisements to the trade, which, as noted above, had begun in December, 1925, had a uniform type of layout, carried illustrations of the product, of its use, and in the text described it. The advertisements did not carry coupons, although the last paragraph of each suggested that a trial reel containing 12 yards of Shirtsmooth be ordered. The following

excerpt from one of the trade advertisements is illustrative of the appeals made in the trade campaign:

> Clothiers have waited years for some device to make trousers fit at the waist—neatly, comfortably, snugly. And now the problem is solved by Shirtsmooth.
>
> Shirtsmooth does away with that annoying unsightly shirt bulging out at the waist. It works equally well if worn with suspenders or belt. It makes a man always look neatly dressed; always feel at ease mentally. He enjoys real dress comfort.
>
> Manufacturers of men's and boys' clothes who have tried Shirtsmooth are enthusiastic about it. Merchants, buyers, and salesmen welcome Shirtsmooth as the latest ally in their "Dress Well and Succeed" campaign.
>
> Shirtsmooth gives you and your sales force a new selling point. It will help you sell more clothes to more people. It will win and hold customers' goodwill.
>
> National advertising of Shirtsmooth has started and will substantially increase its popularity. This demand will be reflected through your customers. Be ready for them by ordering Shirtsmooth now.
>
> Your manufacturer will put Shirtsmooth in your new line if you ask for it. But first try it yourself. We will gladly send you, free of cost, a sample large enough to equip a pair of trousers. Made in all staple colors—white, pearl, buff, slate, and black.
>
> Shirtsmooth is easily sewn onto the trouser curtain where it grips and clings—gently yet firmly—to the wearer's shirt. It will not stretch. Neither will it bind the wearer nor mar his clothes. Always and everlastingly it "Keeps Shirts Smooth and Trousers Snug."

Some of the headlines that appeared in the trade-paper advertising were: "Shirtsmooth Satisfies the Manufacturer," "Retailers Approve Shirtsmooth," "All Your Customers Need Shirtsmooth," "Shirtsmooth Will Sell More Suits."

The advertisements appearing in the consumer publications had various illustrations showing men with shirts bulging at the waist; some of them were in street clothes, others in dress clothes, and others in sport clothes. Small insert illustrations indicated that trousers equipped with Shirtsmooth gave a neat, snug appearance to the clothing. None of the consumer advertisements carried headlines below the illustrations. A typical advertisement illustrated a man in street clothing with shirt bulging at the waist; it had the following text:

He doesn't know how unsightly he is—around the waist. And without a thought, he will hitch up his trousers and tuck in his shirt. Like many men he has made it a habit.

You may not notice the bulging shirt around your waist. You may prevent its getting as bad as this by continually hitching up and tucking in. But you probably have noticed how uncomfortable it is, and have simply put up with the nuisance.

Shirtsmooth—the new trousers curtain (the strip of fabric that goes around the top of the trousers, inside) does away with this annoyance. It grips and clings comfortably, whether you wear suspenders or belt. It keeps shirts smooth and trousers snug.

Shirtsmooth insures neatness and comfort for all men in all walks of life. Ask for it in your next suit, and have your tailor or clothier put it in the clothes you are wearing. If they cannot supply you, send 50 cents for a 42-inch piece.

Advertisements inserted in *Good Housekeeping* featured the use of Shirtsmooth for boys' clothing.

Portfolios containing samples of Shirtsmooth and illustrating the advertising campaign planned for the trade and for consumers were prepared and given to the salesmen, who used them in their solicitation of manufacturers, wholesalers, and retailers.

Special intensive test campaigns conducted under the guidance of two salesmen were used in an attempt to introduce Shirtsmooth in Rochester, New York; Providence, Rhode Island; and Knoxville, Tennessee. Demonstrations were given by the salesmen in the windows of leading men's stores. Fifteen hundred lines of newspaper advertising were run prior to and during the period of demonstration in these cities. Window and counter displays were set up through cooperation with retailers. The leading retailers in each city were induced to stock about $20 worth of Shirtsmooth. In Providence and Rochester these stocks were sold during and after the demonstrations, but no appreciable repeat sales followed. Practically no sales, however, resulted from the demonstrations and advertising in Knoxville, Tennessee. It was impossible to decide whether or not permanent results had been secured from the intensive campaigns in these cities.

During the spring of 1926, two graduate students made a survey concerning Shirtsmooth among consumers, tailors, and stores selling men's furnishings, as the basis of a school thesis. Although this survey was limited primarily to the Boston territory, numerous interesting points were brought out, some of which

were contrary to the results secured during the initial survey by the agency.

Parts of the report of the investigation appear below:

Introduction:

The purpose of this report is to set forth a selling and advertising plan for the successful marketing of Shirtsmooth, a new patented product manufactured by the Manly Elastic Company. To aid in deciding the distribution policy and sales plans, an investigation was made to determine:

1. The extent of the market
2. The uses of the product
3. The strong features of the product
4. The weaknesses of the product
5. The probability of success of different sales promotional methods

The report will cover:

I. The procedure of making the three questionnaire studies, covering:
   1. Consumers
   2. Tailors
   3. Clothing store buyers

II. The results of each questionnaire study

III. A summary of all the data obtained

IV. Conclusions that lead to the formulation of selling and advertising plans

V. The recommended plan will be followed by a brief criticism of the company's present methods of developing the sales of Shirtsmooth and a criticism of specific advertisements

I. The Mechanics of the Investigation

In general. All answers were obtained by means of a personal interview. The importance of getting correct impressions of opinions made the sending of questionnaires by mail impracticable. Care was taken to register the exact answers and not to influence the answers in any way whatever.

1. *The Consumer Investigation*

Answers were obtained from 97 consumers, distributed geographically as follows:

Boston and vicinity	73
Ohio	20
New York	2
Other	2
Total	97

Both small towns and larger cities were included in the survey. For example, the 73 returns from Boston and vicinity are from seven towns other than Boston.

The consumers interviewed are classified into occupational groups as follows:

	Number	Percentage
Store managers (small stores)	20	20.6
Students (college)	17	17.5
Clerical workers	15	15.5
Professional men	11	11.3
Salesmen	9	9.3
Laborers	9	9.3
Executives	6	6.2
Retail salesmen	5	5.1
Army and Navy officers	2	2.06
Light laborers (barbers, etc.)	2	2.06
Farmers	1	1.08
Total	97	100.0

An endeavor was made to get as wide a distribution among different classes of consumers (as represented by their occupation) as possible, so that results might reflect what is true of the average man. The large number of store managers is justified on the basis that they manage *small* stores and therefore probably have incomes which are representative of the average man. A considerable proportion of the clerical workers are bank employees. Only a few laborers were interviewed because laborers do not provide a fertile field for the sale of an article to improve personal appearance and neatness. As for students, the weighting given to their answers (17.5%) is not considered unduly large in proportion to the total potential market for a product such as Shirtsmooth, which is designed to improve personal appearance.

The returns classify themselves into age groups as follows:

	Number
Under 20 years	3
20-30	45
30-40	23
40-50	16
50 and over	10
Total	97

This selection was purely accidental, as no attempt was made to secure a definite number of answers within definite age groups.

The investigation was intended to be only a help, not a final authority. Limitations in time and money did not permit an exhaustive survey the results of which could be taken at their full value. Since indications, not final conclusions, were sought, this survey should be sufficiently comprehensive and accurate.

2. *Tailor Investigation*

Twenty-one neighborhood tailors were interviewed. By volume of trade these tailors are grouped as follows, according to estimates made by the interviewers:

Large	2
Medium	3
Small	16
Total	21

According to class of trade these tailors show the following grouping:

High grade	5
Medium grade	12
Low grade	4
Total	21

Of the 21 tailors, 18 interviewed do custom tailoring as well as pressing and repairing.

Since the selection of the different sizes and classes of tailors was made quite at random, the results should be indicative of the conditions surrounding the average neighborhood tailor. Neighborhood tailors are in close contact with consumers and for this reason should be able to give particularly valuable information on any product used in men's clothes. Furthermore, the Manly Elastic Company attempted to obtain initial distribution through this kind of tailors; so their opinion should be worth while.

All tailors interviewed except one are located in the vicinity of Boston. Four of the 21 handle Shirtsmooth. Of the remaining 17, eight have had the product brought to their attention but did not buy any of it.

3. *Clothing Store Investigation*

Seven retail clothing stores were visited and a clothing buyer or floor manager interviewed in each to ascertain:

1. Whether the product is now being handled by the store; and if so, if it is being pushed aggressively;
2. What clothing buyers and salesmen think of Shirtsmooth;
3. Means by which the product can be effectively distributed through retail clothing establishments;
4. Weaknesses that are inherent in the product and in the method of sales promotion.

It is apparent that these cover varying classes of trade and may be considered typical of the larger communities.

Conclusions to Section I:

The investigation covered 97 consumers, 21 tailors, and 7 clothing store buyers and salesmen. We believe that the field study was suf-

ficiently comprehensive to obtain valuable information, some of which is essential before a selling and advertising plan can be devised. Exhibit 1 shows the questions asked the consumer and Exhibit 2 shows the tailor questionnaire. The types of questions asked the clothing store buyers were modeled after the tailor study, but many others were inserted as opportunity and necessity arose.

EXHIBIT 1

SHIRTSMOOTH CONSUMER QUESTIONNAIRE

1. Do you wear suspenders_____ or a belt?_____
2. Do you buy custom-made_____ or ready-made_____ clothing?
3. In what sports do you participate?

Golf	Billiards
Tennis	Horseshoe pitching
Bowling	Horseback riding

4. When playing any of these games, does your shirt tend to work out?
5. To what extent does this bother you?
   Considerably_____ Little_____ Not at all_____
6. When wearing business clothes or when you are at work, are you troubled by having your shirt work up?
7. To what extent does this bother you?
   Considerably_____ Little_____ Not at all_____
8. How much would you be willing to pay your tailor to sew a rubber curtain in the waistband of your trousers and avoid this difficulty?
   25 cents_____ 50 cents_____ $1.00_____ $1.50_____ Not at all_____
9. If you could buy your clothing fitted with this product would you prefer it?
   In Knickers
   White ducks
   Street clothes
   Dress clothes
10. How much more would you be willing to pay?
    In Knickers
    White ducks
    Street clothes
    Dress clothes
11. Do you see any objections to the use of the product?
12. Remarks:

Name_____ Age_____
Occupation_____
City_____ State_____ Date_____
Physical appearance: Stout_____ Medium_____ Thin_____

EXHIBIT 2

SHIRTSMOOTH TAILOR QUESTIONNAIRE

1. Has this product ever been brought to your attention?
2. If so, did you buy any of it?
   Why?
   If tailor does not handle:
3. To what extent have you had complaints from your customers concerning their shirts' working loose?
   Considerable_____ Few _____ None _____
   If tailor handles product:
4. Do you try to induce your customers to have it put in the waistband of their trousers?
5. How much do you charge?
   a) Is this enough to give you a satisfactory profit?
6. What favorable comments have you heard?
7. What complaints have you had?
8. What do you think of the product for
   Knickers
   White ducks
   Street clothes
   Dress clothes
9. What objections do you see for this product?
10. Remarks:

Name_____ Address_____
Size of store_____ Class of trade_____
Kinds of work done_____
Date_____

II. INFORMATION ACQUIRED BY THE INVESTIGATION

1. *From Consumer Investigation*

A tabulation of the answers to the consumer questionnaires brings out many interesting facts. In the first place, there seems to be no important difference in their opinion of Shirtsmooth between those who wear custom-made clothing and those who wear ready-made clothing. That the market is as good in one group as in the other is proved by the answers to Questions 2 and 9, as given in Table 1.

TABLE 1

"If you could buy your clothing fitted with this product, would you prefer it in street clothes?"

	Yes	No
Those who wear only custom-made clothing	70%	30%
Those who wear only ready-made clothing	74	26
Those who wear both	62	38

No tabulations were made under this question for sport and dress clothes because of the large number of consumers who do not wear such. Everyone wears street clothes.

Of the consumers interviewed:

29 wear only custom-made clothing
52 wear only ready-made clothing
16 wear both custom-made and ready-made clothing

The fact that the percentage of consumers who said they would prefer to have Shirtsmooth in the business clothing they purchase is practically the same in each of the three groups indicates that the market is not limited to ready-made clothing or to custom-made clothing. There is relatively as much of a potential market in one group as in the other.

The next tabulation made was for the purpose of determining whether the potential demand is stronger for sport clothes than for street clothes. Of course it is realized that the amount of sport clothing purchased each year is much less than the annual purchases of street clothing. The following tabulation (Table 2) was made for the purpose of determining the relative need for such a product as Shirtsmooth *per man* in sport clothes and in business clothes. The greater the need, the easier it is to introduce the product.

By combining questions 3, 4, and 5, and questions 6 and 7, Table 2 was worked out.

TABLE 2

"To what extent are you bothered by having your shirt work up?"

	When Participating in Sports		When Wearing Business Clothes	
	Number	%	Number	%
Considerably.....	33	40	28	28.9
Little.....	35	43	21	21.6
Not at all.....	14	17	48	49.5
Total.....	82	100	97	100.0

The fact that only 17% said they were not bothered at all when participating in sports while 49.5% were not bothered at all when wearing business clothes indicates that there is a much greater need for Shirtsmooth in sport clothes than in business clothes or street clothes. It should also be noted that 40% were bothered considerably when participating in sports and only 28.9% when wearing business clothes. These results tend to prove that it would be easier to influence consumers to try out Shirtsmooth in their sport clothes than in their business or street clothes.

In an attempt to throw more light on this subject, the following tabulations (Tables 3 and 4) of questions 9 and 10 were made.

TABLE 3

"If you could buy your clothing fitted with this product, would you prefer it?"*

	Yes		No		Don't Wear
	Number	%	Number	%	Number
In knickers	51	89.4	6	10.6	28
In white ducks	37	68.5	17	31.5	31
In street clothes	62	73.	23	27.	0
In dress clothes	29	51.8	27	48.2	29

*No answers—12.

TABLE 4

"How much more would you be willing to pay?"*

	Don't Wear	25 Cents		50 Cents		75 Cents		$1 and Over		Nothing	
	Number	Number	%	Number	%	Number	%	Number	%	Number	%
In knickers	28	2	3.5	23	40.3	1	1.8	18	31.6	13	22.8
In white ducks	31	3	5.5	13	24.	1	2.1	13	24.	24	44.4
In street clothes	0	3	3.5	24	28.2	1	1.1	22	26.2	35	41.
In dress clothes	29	0	....	14	25.	1	1.9	9	16.	32	57.1

*No answers—12.

The percentage figures in Tables 3 and 4 apply to the total number of those who do wear, not necessarily to the total number of consumers who answered the questions. For example, in Table 3 the figure 89.4% means that 89.4% of those interviewed *who wear knickers* would prefer to have the knickers they buy fitted with Shirtsmooth. The figures in the "Don't wear" columns were not included when figuring percentages.

Table 3 bears out the conclusion drawn from Table 2, but with much less force. It indicates that practically everyone would prefer to have Shirtsmooth in knickers. It also shows that 73% said they would prefer to have it in street clothes, while Table 2 showed that 49.5% were not bothered at all by having their shirts work up when wearing street clothes. There is some inconsistency here, but it can be explained by the inclination of most persons to say "yes" when asked whether or not they would *prefer* anything. Question 9 is really a slightly "leading" question.

Table 4 shows that many who would prefer to have Shirtsmooth in their clothing are not willing to pay anything for it. Of those who said they would pay "nothing," the largest percentages apply to dress clothes, white ducks, and street clothes. Only 22.8% said they would pay "nothing" to have the product in the knickers they buy. The explanation of the fact that 44.4% said they would pay "nothing" to

have Shirtsmooth in white ducks is that the cost of a pair of white ducks is comparatively small.

The figures for the amount that anyone would be willing to pay cannot be accepted at anywhere near their face value. Shirtsmooth is a new product. Consumers have no idea of its cost of production or of its market value. Many said they would be willing to pay whatever it was worth or whatever amount would allow the retailer a fair profit. Those who gave estimates usually did so with a large amount of hesitancy. For these reasons, it is probable that the figures in Table 4 are not of much real value as actual figures. The relation between the different classes of clothing might, however, be of some value.

The relation between the percentages in Table 3 indicates that the percentage of preference is strongest for knickers, second for street clothes, third for white ducks, and weakest for dress clothes. Table 4 shows the same relationship between the different kinds of clothing, as is shown by the percentages in the columns headed "nothing." The other figures in Table 4 mean little because each consumer who was willing to pay gave a price that he thought would be expected for the product. Very few had any idea of what they would actually be willing to pay.

Tables 3 and 4, then, seem to indicate that the strongest need for Shirtsmooth lies in knickers. There is indication, also, that a good market might be developed for its use in street clothes. The weakest market appears to be in dress clothes, probably because of the use of suspenders.

The next classification of consumers was into stout, medium, and thin. The purpose was to determine the relation between the physical characteristics of a man and his need for Shirtsmooth. For this purpose, the answers to questions 6 and 7 were used. If stout men need Shirtsmooth more than thin men, this fact should show up in the relative extent to which they are bothered in their ordinary activities by having their shirts work up when wearing business clothes.

TABLE 5

"To what extent are you bothered by having your shirt work up when wearing business clothes?"

	Considerably		Little		Not at All	
	Number	%	Number	%	Number	%
Stout	6	33	4	23	8	44
Medium	15	28	12	22	26	50
Thin	6	23	7	27	13	50

Table 5 indicates that there is little difference in the need for a product such as Shirtsmooth between stout men and thinner men. The

percentages of those who are not bothered at all are practically the same for all three groups. It should be observed, however, that the sample was rather too small to give results that could be taken as conclusive, for the total number of stout men interviewed is only 18. For this reason the percentage in this table cannot be used as final proof that stout men are not bothered by having their shirts work up any more than thin men.

The next step in analyzing the returns was to list all the objections and the frequency of each objection. The purpose of this is to show what consumers consider the weak points of Shirtsmooth. The company can then undertake to overcome these objections by advertising, by more aggressive personal selling, or by changing the product slightly. Table 6 shows the reactions of consumers to Shirtsmooth. Some gave more than one objection, and therefore the total number of objections is larger than the total number of consumers interviewed.

TABLE 6

Objection	Frequency
1. No objection	68
2. Wear out before trousers Will not last Not strong enough Rubber pull loose	11
3. Rubber harden or rot with perspiration Rubber lose life	10
4. Uncomfortable Bulky around waist Cause perspiration	8
5. Stop circulation Might draw unnecessarily Pull shirt too much	4
6. Suspicious of rubber Unhealthy to have rubber next to body	3
7. Discolor or mark shirt	2
8. Hand pressing will ruin rubber	1

Only 29.8% of the consumers saw any objection to the product at all. Most of the others said that it looked as if it would work, was a good idea, or something like that. Many said that they would not give an opinion until they had seen the thing worked out.

The table itself needs little explanation. Objections which were practically the same were grouped as shown in the table, for the purpose of making comprehension more easy.

2. *From Tailor Investigation*

a) Those who handle Shirtsmooth

Two of the four try to induce their customers to have Shirtsmooth

put in the waistbands of their trousers and two do not. One said he would not sell any of it to his customers because his son had tried it out and found it was no good. Only two have had any sales for the product. None of the four is pushing the sale of Shirtsmooth aggressively.

Two tailors charge 75 cents; one would charge 75 cents if he sold any, and the fourth would charge 50 cents. Two said that 75 cents was enough to give a satisfactory profit, and one said that 75 cents was not sufficient. The fourth gave no answer.

One tailor said that he had heard some favorable comments from his customers. No complaints about Shirtsmooth had been received by any of the tailors from their customers.

Two of the four tailors said that the product was equally good for all kinds of men's clothing. One said that it was all right for custom-made clothes. The fourth said it was no good for any kind of clothes.

Outside of the above there were no objections to Shirtsmooth by these four tailors. One of them said that it "tested pretty good"—the rubber stayed in.

These four tailors who handle the product were not anxious to talk about it. None of them seemed to think that Shirtsmooth is a wonderful thing.

b) Those who do not handle Shirtsmooth

There are 17 tailors in this group. Eight have had the product brought to their attention; the chief reasons for not buying any of it were that they did not think it would work, that they were afraid to take a chance on investing money in a new product, and that they could not sell it because customers would not ask for it.

Three of the 17 tailors have had a few complaints from their customers concerning the working loose of shirts. The remaining 14 have had no complaints.

Five said the product was good for all kinds of men's clothes. Two said it was best for sport clothes. One said that it was good only in custom-made clothes. Six said that the product might be all right, that it might work; they said it looked all right but that they would like to see it tried out. Four tailors made the remark that the product was not practical, that it looked pretty good but would not work out well in practice.

The chief objections to the product were:

1. The rubber would wear out or rot
2. Naphtha cleaning would ruin the rubber
3. Would make shirt dirty
4. Difficult to alter trousers with Shirtsmooth in them
5. Unhealthy to have rubber in clothes
6. Cannot work when driving an automobile

Several of the tailors said that if the company got the "big fellows"

to handle Shirtsmooth, then the small tailors would take it up; the place to get it started is in the big stores that can afford to push the product. Even those who conceded the merits of the product would not be willing to buy any of it until they saw that it was being used considerably. The small tailors handle what people ask for. They do not like to take up new things because of the risk involved.

3. *From Clothing Store Investigation*

Since there were so few buyers interviewed, a discussion of the individual investigations will give an intimate picture of the situation and set forth the different points of view.

The manager of one company, an old, reputable, and high-grade clothing house, was very much interested in Shirtsmooth, although he had never seen or heard of it before. He considered it a practical accessory for men's clothing and saw its greatest use in sport clothes and boys' clothing. There is little use for Shirtsmooth in their men's clothes because they at present use some small attachments which effectively keep the shirt from working out. Besides patented arrangements, they secure the shirt to the trousers by buttons. The manager also stated that, as far as his shop was concerned, Shirtsmooth had a wide use in boys' clothing because the mothers were interested in having their children look neat, and because many styles and novelties could be effectively started through this channel. He did not like the idea of sewing Shirtsmooth in, but suggested, rather, that it be put in with snappers. He saw no objections other than that the rubber might deteriorate under perspiration.

The manager of the men's clothing department of another shop catering to an exclusive clientele had never seen Shirtsmooth before but was interested in it. He considered that its widest application would be in sport clothes but that it would have limited use in street clothes. He thought that it would not be advisable for a retail clothing store to carry Shirtsmooth until it was better known to the public, and while he admitted the probable merits of the product, he was passive as far as the application to his trade was concerned.

He suggested that the best way to get something of this nature started was to encourage the recognized style leaders in each community to wear it. This number would include the clubmen of Boston and perhaps some of the better dressed men of Harvard College. Emulation would prompt others to purchase Shirtsmooth.

The interview with the manager of the clothing department of the Clarke Clothing Company, a store which sells low-medium and medium-priced men's wear and has been carrying Shirtsmooth for some time, was particularly fortunate. The manager stated that some had been sold, that there had been several calls for it, and that these calls had come as a result of the magazine advertising. This man was thor-

oughly convinced of the advantages of Shirtsmooth; he considered that there was a wide use for the product in all kinds of men's clothing and that the problem was merely to educate the public in order that clothing dealers would demand it from manufacturers. He had heard some favorable comments—one man had had it sewed in the cuffs of his golf knickers. He had heard no complaints. He thought that naphtha cleaning would probably limit the life of the rubber in Shirtsmooth.

When asked what he considered a good method of sales promotion, he offered quite definite ideas. To educate the public, it would be necessary to do local newspaper advertising; his store would be willing to place Shirtsmooth insertions under the store name, but the expense of this space would have to be borne by the Manly Elastic Company. He further suggested that a sampling campaign would be effective. Let the Manly Elastic Company give to retailers a three to six months' supply on the condition that the clothing store would put Shirtsmooth in every pair of trousers going out of the store. Customers would get in the habit of wearing Shirtsmooth and, if they liked it, would demand it in their next suits. He thought that such a sampling campaign would be rather inexpensive as a method of getting people to wearing and talking about the product.

A floor manager at a large, medium-grade clothing house was interviewed and stated that the store had some Shirtsmooth but was not pushing it because the product was still in the experimental stages and could not, as yet, be fully recommended by the store. Employees of the store are trying it. No calls have been received for Shirtsmooth, but it has been priced at 50 cents. This price is not sufficient to yield any profit, but it is carried as a service feature. It has been shown in the window, but there has been no advertising in the newspapers. The store considers that Shirtsmooth has a use only in knickers and white ducks. This man sees no objections except that it might be better to button Shirtsmooth into the waistband instead of sewing it in because linen knickers are washed frequently and washing might injure the rubber. He thought that an educational campaign to consumers would be necessary before they could be induced to ask for Shirtsmooth and to accept it.

The first man seen at a department store having a large men's wear department was a floor man and, though the store had Shirtsmooth and he was familiar with it, he could see no use for it This interview was unsatisfactory because the floor manager's time was taken up by the salesmen and he was unwilling to talk at length A buyer was also interviewed and gave more concrete data The store had received no calls for Shirtsmooth but would charge 50 cents for putting it in. After close questioning he admitted that there might be some use for Shirtsmooth. The store, though, would not push it, and it was up to the manufacturer to get it started.

The buyer in the men's clothing department of a store catering to college trade was acquainted with Shirtsmooth and thought that its use was largely limited to knickers and white ducks. He intends to order some as an experiment in his next shipment of knickers, but his spring order was placed before the product was brought to his attention. This shop does some custom tailoring, but it would not charge anything for Shirtsmooth in a custom-made suit. The department does not carry the accessory in its tailoring shop. The manager thinks that the best way to get Shirtsmooth started is to introduce it to young men.

The manager of the clothing department of a large specialty store stated that he had seen Shirtsmooth but did not think that his class of trade would take to it, because of its novelty features. He saw a use for Shirtsmooth, especially in sport clothes and clothes of medium and low prices. He emphasized that the high-class trade seldom accepted novelties and innovations.

It is fair to add that the interviewer also called on a medium-price men's wear store, but as no floor man or buyer was present, and as the two salesmen had never seen or heard of Shirtsmooth before, no information could be obtained. Also, an interview with the manager of a small clothing store in Cambridge gave no information, because the manager had never heard of Shirtsmooth and really did not know what its application to his merchandise was, since the central management of the store, which was one of a chain catering to college trade, determined most of his policies and work.

III. Summary of the Information Obtained from the Investigation

1. *Consumer Investigation*

The greatest need and consequently the best potential market for Shirtsmooth among men is in sport clothing, especially in knickers. There probably would be a large demand for Shirtsmooth in white ducks at a nominal charge, such as 25 cents extra. The potential market for Shirtsmooth for use in business clothes is limited by the fact that only 50% of the men are bothered at all by having their shirts work up when wearing such clothing. In dress clothes the need, or potential demand, for Shirtsmooth is so small as to be almost negligible.

The market is equally strong in custom-made clothing and ready-made clothing. The return on the questionnaires also indicated that there was no relation between the stoutness or slimness of a man and his need for a product which would keep his shirt from working up.

A majority of the consumers interviewed gave no objections to the product. Of the objections received, however, the most common ones were the following, in order of frequency:

1. The product would not stand up well under use
2. The rubber would harden, rot, or lose its life when continually exposed to perspiration
3. It would cause bodily discomfort to have Shirtsmooth in one's trousers
4. It would retard circulation and pull too much
5. Some men are suspicious of rubber around the body
6. Shirtsmooth would discolor or mark the shirt

No conclusions were drawn from the questionnaires as to the proper price for Shirtsmooth because of the inconsistency shown by the answers in regard to price and because of the inability and unwillingess of the ordinary consumer to state what price he would be willing to pay for a product he has never seen before.

2. *Tailor Investigation*

The tailors who handle Shirtsmooth are not pushing it aggressively. They have sold very little of it. The reason given is that consumers do not ask for it. It appears that tailors are an ineffectual channel through which to obtain initial distribution.

Forty-five per cent of the tailors who do not handle Shirtsmooth have had the product brought to their attention. The chief reason for not purchasing was that they were afraid to take up an unknown product for which there was no consumer demand. The consensus of opinion of all the tailors interviewed was that the company would have to persuade the large clothing stores to introduce Shirtsmooth and develop a demand for it before the small tailors would handle it.

Most of the tailors were noncommittal regarding the merits and weaknesses of Shirtsmooth. They reserve their opinions until the product has been tried out and its success or failure made certain. The most frequent objection was that the rubber would wear out or lose its life. Other objections were that naphtha cleaning would ruin the rubber, that Shirtsmooth would make the shirt dirty, that it would be difficult to alter trousers equipped with Shirtsmooth, that it is unhealthy to have rubber in clothing, and that Shirtsmooth cannot work when one is driving an automobile.

3. *Clothing Store Investigation*

Shirtsmooth has its widest use in men's sport clothes and boys' clothing, but a good method of installing the product has not yet been developed. It is doubtful if the rubber curtain will wear as long as the trousers. It will be necessary for the company to introduce Shirtsmooth to the consumer before many retail clothing stores will actively push it. There is considerable doubt of the practicability of Shirtsmooth. One suggested plan of introducing the product is by the use of a local newspaper advertising campaign supplemented by sampling, especially to better-class men.

There were, of course, some differences of opinion. One buyer thought Shirtsmooth had a wide application in all types of clothing for all types

of men. Another considered its use limited to low- and medium-priced clothing. A third considered it a novelty or fad.

The specialty salesmen and the advertising during the early part of 1926 had created considerable interest in Shirtsmooth among small manufacturers of knickers and sporting goods. One of the manufacturers offered it, at his showing of 1927 merchandise, to customers without extra charge. Several of his smaller customers requested it, but two of his most important customers refused his offer and stated that they did not want it in any of the knickers or white duck trousers that they purchased. The manufacturer explained to the Manly salesmen that these customers were afraid that their customers would object to rubber around the waistbands of their trousers. Another small manufacturer of trousers, who also offered Shirtsmooth to his customers at no charge, stated that all had requested it; he placed an order for 20,000 yards of Shirtsmooth with the company.

In the fall of 1926 a retailer who had become interested in Shirtsmooth requested a manufacturer to equip with Shirtsmooth all the suits which he purchased. The manufacturer, whose yearly sales were well over $10,000,000 in medium-grade suits, investigated Shirtsmooth, decided to have it placed in all the suits which he manufactured, and arranged with the Manly Elastic Company to purchase 800,000 yards of Shirtsmooth during 1927 and 1928. The manufacturer stated that he had never seen Shirtsmooth advertised and had become acquainted with it through the retailer. He planned to stress Shirtsmooth in his advertising to the trade and in his selling as a new and desirable feature of his clothing.

A statement of advertising expenditures upon Shirtsmooth from January 1, 1926, to November 1, 1926, is shown in Exhibit 3.

In addition to the expenditures indicated in Exhibit 3 were the salaries, traveling expenses, and other incidental expenditures of salesmen, which were estimated to be approximately $15,000.

Total sales of Shirtsmooth by the company up to November 1, 1926, excepting the large contract mentioned above, which called for first deliveries in December, were approximately $35,000. This included sales to clothing manufacturers, to wholesalers of tailors' supplies, and to manufacturers and distributors of athletic goods. In view of the amount spent for advertising and sales effort, the executives of the Manly Elastic Company con-

sidered these results unsatisfactory. They desired to increase sales as soon as possible to at least 5,000,000 yards a year, which would amount to about $500,000. On this basis satisfactory manufacturing profits could be secured.

The question of a revision of advertising and selling plans for Shirtsmooth was brought forward by the executives of the company in November.

EXHIBIT 3

MANLY ELASTIC COMPANY

ADVERTISING EXPENDITURES TO INTRODUCE SHIRTSMOOTH, JANUARY 1 TO NOVEMBER 1, 1926

EXPENDITURES THROUGH THE AGENCY		
Direct mail	$14,895.00	
Cuts and art work	9,114.00	
Commission on art work	1,291.00	
Saturday Evening Post	35,750.00	
Liberty	1,500.00	
Progressive Tailor	590.00	
Dry Goods Merchant Trade Journal	1,294.00	
Daily News Record	3,277.00	
Chicago Apparel Gazette	3,024.00	
National Retail Clothier	1,950.00	
Good Housekeeping	1,450.00	
Miscellaneous trade-paper and newspaper advertising	2,656.00	
Printing	1,575.00	
Portfolios	1,023.00	
Miscellaneous	300.00	
Commission on placements	1,573.00	$81,262.00
OTHER SHIRTSMOOTH ADVERTISING		
Dealer-help material	$ 2,760.00	
Poster advertising contract in New York	13,300.00	
Various art work	317.00	
Cartons	1,797.00	
Postage	454.00	18,628.00
Total advertising expenditures		$99,890.00

COMMENTARY: In this case we have an example of advertising to consumers and retailers as a means of inducing manufacturers to adopt a new type of fabricating material.[2] The company had some hopes of direct sale of Shirtsmooth through the retail trade but its interest in direct sale primarily was to make the product known to retailers and consumers as a means of leading clothing manufacturers to adopt it.

The case presents an excellent example of overenthusiasm for a product on the part of its inventor and backers with consequent over-

[2] See also Rubber Wire Company, page 482.

estimation of the demand that might be stimulated. In their enthusiasm the executives of the Manly Elastic Company failed correctly to appraise the need for the product and its marketing possibilities before proceeding on an expensive selling and advertising program. The advertising agency likewise failed correctly to appraise the product and in its report heightened the enthusiasm of the Manly executives. That there was an overestimation of the need for the material is shown in the results of the questionnaire study of the graduate students, in the results of the test campaign carried on in two cities, and in the results of the large campaign.

While we have found that manufacturers not infrequently resist adoption of new and improved fabricating materials or parts, on the whole they are not immune to improvements which might increase the salability of their products and they naturally attempt to estimate the consumers' reaction to the new material or part. If the item appears likely to fill a real need on the part of the consumer and accordingly to make the product in which it is to be included better and more salable, the manufacturers are inclined to accept it fairly readily. The manufacturers, in this instance, apparently concluded that the need for a product such as Shirtsmooth was not great enough to arouse much enthusiasm among a large number of people. Accordingly, since inclusion of Shirtsmooth in clothing at an additional expense was not likely to make clothing more salable, or, if omitted, less salable, it is easy to see why clothing manufacturers were not enthusiastic about adopting the product.

It appears sound to generalize by saying that in selling and advertising a new fabricating material or part as a means of inducing its acceptance by manufacturers, the same principle applies that applies in all selling and advertising; namely, the product must meet a need of the consumer which can readily be stimulated into an active want if it is to be marketed successfully. Since the consumer need met by Shirtsmooth was of such little strength that consumers were not likely to become greatly interested in it, advertising to bring about its acceptance by clothing manufacturers held little chance for success.

In this particular case the largest need for the product and the most promising market was in the field of sport clothes. Even here, the expense involved in educating the public generally about the new product in order to force acceptance by manufacturers, as compared with the sales likely to result, made the adoption of general consumer advertising doubtful.

February, 1928 N. H. B.

Hartley Company[1]

MANUFACTURER—UMBRELLA FRAMES

ADVERTISING—*Use of Consumer Advertising for Fabricating Part.* To increase the portion of its sales volume represented by sales of the high-grade umbrella frames that it sold under a trade name and on which its profit was relatively large, the company, which manufactured a variety of umbrella frames and allied items, decided to advertise the trade-marked frames to consumers. Because of style changes in umbrellas, the company later discontinued this advertising. When the company developed a new type of frame, however, it considered advertising that to consumers.

(1924-1927)

The Hartley Company was established in Baltimore in 1886 to manufacture small brass castings and pressed-steel goods and novelties. As the business grew, production became more and more specialized until, in 1905, the company decided to manufacture only umbrella frames, ribs, rods, runners, notches, caps, cane ferrules, and similar products. This decision proved to be a wise one, and in a few years the company became one of the five largest manufacturers of these products. The executives considered advertising during the 1924 fall selling season the company's high-grade umbrella frames bearing the trade name "Drylea" in national mediums in order to make the trade name popularly known and thereby to increase the sales of this special frame, on which there was more profit and less competition than on the untrade-marked frames. The company did not expect its advertising to increase the total sales of frames greatly. During 1923 and the first part of 1924 competition had been keen; sales were made mostly on a price basis, and conditions in the umbrella frame business were, in general, considered unsatisfactory.

There were about 100 manufacturers of umbrellas in the United States in 1924; only about 10 of these were large manufacturers. Certain of the smaller manufacturers produced very cheap products and were not considered reliable. Umbrella manufacturers did not make the frames they used but bought them from frame manufacturers, such as the Hartley Company. Most umbrella manufacturers were located in New York City, Baltimore, Philadelphia, and Lancaster, Pennsylvania.

[1] Fictitious name.

One of the officers of the Hartley Company, acting as a salesman, visited the leading umbrella companies at least twice a year. The peak sales periods each year were from July to November, and February to March. The better-grade frames were made and sold during the fall season and the cheaper grades during the spring season. Sales of the company in 1923 amounted to approximately $1,200,000.

Prior to 1924 the Hartley Company had manufactured 25-inch frames with 8 ribs for women's umbrellas, 27-inch frames with 7 or 8 ribs for men's umbrellas, and a few 23-inch and 24-inch frames with 8 ribs for women's umbrellas. There had been practically no style element in frames, and during the dull season of April, May, and June, the factory force had made up regular frames for stock. The only style element existent in umbrellas had been in the cloth covering of the frame, and in the handle, which was not considered a part of the frame, but was a separate element in the assembly of umbrellas. The adoption of silk as a covering necessitated the use of a frame carefully made, because any rough edges at the joints would make small holes in the frail silk covering, even during shipment. To meet the demand for a fine-quality frame the Hartley Company had devised the Drylea frame of well-tempered steel, so carefully made that the frailest covering was not affected by rubbing against the joints. This frame was of the interlocking variety, with guards against shearing, which was likely to occur with the ordinary type of frame.

Umbrella frames were sold in lots of a dozen; the price in 1924 averaged $3 a dozen. The company received $3.50 a dozen, however, for its Drylea frames. In 1923, Drylea frames constituted only 25% of the Hartley Company's total sales of frames. All frames were guaranteed against defects, but no guaranty even on the Drylea frame was made against damage to the cover from the frame. The Drylea frame was protected by several patents covering the company's method of finishing the joints.

In considering whether or not to advertise the Drylea frame to consumers, the executives of the Hartley Company could find little precedent. One small manufacturer of frames in New York had attempted general advertising but was said to have discontinued his advertising, after spending $30,000, because he believed it was not securing results commensurate with the expenditure. The Fox Company, Limited, the largest English manufac-

turer of frames, on the other hand, had advertised its frames in Great Britain for many years and had built up consumer recognition of its brand and retail cooperation in the sale of its product. According to reports made to the Hartley Company, if a customer in an English shop asked to be shown an umbrella but failed to specify a Fox frame or a Fox umbrella, the clerk frequently would show an umbrella with a Fox frame and explain before quoting the price that the umbrella had a Fox frame and was, therefore, a very fine umbrella. The English company, it was stated, was in so strong a position that it refused to sell its product to companies making cheap and unreliable umbrellas.

The Hartley Company considered whether by advertising it could secure a standing in the American market somewhat similar to the position held by the Fox Company, Limited, in England. To crystallize the problem, the sales manager was asked to draw up an advertising and selling campaign.

The sales manager of the Hartley Company believed that women purchased approximately 95% of all umbrellas sold and that, consequently, any advertising of Drylea frames should be directed toward them. The sales manager devised a plan calling for a campaign expenditure of $15,000, during the fall selling season of 1924, for quarter-page space in the *Woman's Home Companion* and the *Saturday Evening Post,* and for small advertisements, one column by four inches deep, to be inserted in Philadelphia and New York City newspapers on rainy days. In addition, the buyers for the umbrella departments in large stores throughout the country and the umbrella manufacturers were to be circularized with broadsides stressing the value of umbrellas with Drylea frames. Small advertisements in electrotype form, ready to be used in the newspapers, were to be offered free to all retail store buyers who desired them. The sales manager also planned in personal selling to stress to customers the advertising which the company was planning to do, and he hoped thereby to secure definite sales results from the advertising.

Because the opinion existed that women seldom examined the inside of an umbrella before purchasing it, the executives of the company believed that the advertising should stress as central ideas of the campaign: "Look into the umbrella before purchasing" and "The importance of the quality of the ribs in an umbrella."

Although the Hartley Company's best frame had borne the trade name Drylea for several years, it had never carried a trade-mark because of the difficulty of placing a trade-mark of any sort on the frame. One of the officers of the company suggested that a white dot be placed on the metal handle near the release spring; another suggested a special tip for the ribs; and a third that a brass plate bearing the Drylea name be attached to one of the ribs.

The executives of the company believed there were certain objections to the plans for advertising. If the advertising was successful in securing consumer recognition for Drylea frames, it was feared that unreliable umbrella manufacturers who used Drylea frames might produce cheap umbrellas which, when the fabric proved unsatisfactory, would bring Drylea frames and any competitors' umbrellas equipped with Drylea frames into disrepute. Confusion would result because the consumer would probably not differentiate between the frame trade name and the name of the umbrella. The important umbrella manufacturers who used Drylea frames extensively opposed the plans because of fear that the advertising would detract from their advertising and from additional advertising which they might undertake. In fact, it was argued that such advertising would harm rather than help them, because it would be assumed that all umbrellas made of Drylea frames would be of the same quality. In addition, numerous department stores followed the policy when possible of selling no trade-marked merchandise other than their own.

The executives were not certain how large an expenditure might be required to popularize Drylea frames or to bring umbrella manufacturers to the point of purchasing them in preference to competing frames. The sales manager believed, however, that even if the advertising did not bring the company a greater share of the total business of the umbrella frame industry, a judicious expenditure in a trial campaign of $15,000 and active sales efforts might increase the proportion of Drylea sales to the company's total sales. If the major portion of the company's business could be diverted to Drylea frames, the sales manager estimated that profits would thereby be increased $50,000 annually.

The Hartley Company decided to spend $15,000 in a test campaign of advertising during 1924. A small brass name plate was prepared to be attached to one of the ribs. The advertising plan

finally decided upon was to use one-quarter page space in the *Saturday Evening Post* five times during the fall selling season, to run small advertisements in New York City and Philadelphia newspapers, to send broadsides to umbrella manufacturers and buyers of umbrellas in the larger department stores in New York City and Philadelphia, and to furnish retailers with electrotypes for use in local papers. The sales manager planned to devote a portion of his time to explaining to umbrella manufacturers the value to them of the advertising.

The first three one-quarter page advertisements which appeared in the *Saturday Evening Post* stressed "A new way to buy your umbrellas," "Look inside for proof of umbrella quality," and "How to choose a gift umbrella." The text of the last of the three advertisements was as follows:

> Buy more than a pretty handle and fine cloth . . . *buy backbone.*
>
> See that the umbrella has the improved, interfitting, sturdy Drylea Frame.
>
> Then pride yourself in your choice of a token that will live long in usefulness as well as beauty.
>
> You can recognize a genuine Drylea Frame by its narrow metal trade-mark, attached to one of the ribs inside.
>
> Tough Swedish Steel ribs . . . . simple, trouble-free joints . . . . Japanned twice . . . . rustless brass swivels and notches . . . . swedged, brazed steel rods . . . . even *copper-covered* steel rib-binding wire. The Drylea is the *only* frame with these advanced construction merits.
>
> Yes, umbrellas are good Christmas gifts—but umbrellas with Drylea Frames are *surpassing.*
>
> DRYLEA
> Hartley Company

The following are samples of the text of the group of one column, four-inch deep illustrated advertisements which appeared in the New York City and Philadelphia newspapers over the Hartley Company's name:

> THE LAST
>
> thing to weâr out about an umbrella with a Drylea Frame is the frame.
>
> It's a "quality" frame—that's why!
>
> Next time ask for a Drylea Frame Umbrella.
>
> Look for the name
> Drylea on the rib.

DRYLEA
SUPER FRAME
Hartley Company

DIVIDE

the many longer years of service you get from an umbrella with a Drylea Frame into its price, and you'll be surprised at its economy.

Next time ask for a Drylea Frame Umbrella.

Look for the name
Drylea on the rib.

DRYLEA
SUPER FRAME
Hartley Company

IT'S ALWAYS FAIR

to remember that one shouldn't expect other umbrellas to be as good as one with a Drylea Frame.

Unbreakable, non-rustable ball and socket action joints are one feature that can't be duplicated.

Next time ask for a Drylea Frame Umbrella.

Look for the name
Drylea on the rib.

DRYLEA
SUPER FRAME
Hartley Company

LIKE A GOOD FRIEND

stormy weather is the test of umbrellas as well as friends.

Choose your umbrella as you would your friends.

You can always depend upon the umbrella with a Drylea Frame.

Next time ask for a Drylea Frame Umbrella.

Look for the name
Drylea on the rib.

DRYLEA
SUPER FRAME
Hartley Company

The series of advertisements in electrotype form for distribution to retailers had borders and devices with attention-gaining value. The following are examples of these advertisements:

(The illustration pictured a large number of people
in a rain storm with umbrellas)

HIGH QUALITY
Umbrellas

Yet the prices are interestingly low! These umbrellas are not only handsome but are amazingly durable, because they have genuine Drylea Frames.

DRYLEA FRAMES
(Dealer's Name)

(The illustrations were a ruined umbrella in the upper left-hand corner of the advertisement and a fine looking umbrella in the lower right-hand corner.)

WHICH
IS
YOURS?

Handsome handles and fine coverings are of no use if the frame of the umbrella is weak, easy to rust and to wreck. Our newest umbrellas have genuine Drylea Frames. They have the longest futures.

DRYLEA FRAMES
(Dealer's Name)

The campaign continued during the fall of 1924 until about $16,000 had been expended. The sale of Drylea frames increased from 25% of the company's sales to 50% of its sales, even though umbrella manufacturers did not approve of the advertising plans. Total sales also improved about 10% over 1923, but much of this increase was attributed to the general improvement in business and to more aggressive sales efforts. Only 25 retailers requested electrotypes to run in their local newspapers. Umbrella manufacturers became accustomed to ordering Drylea frames by name and associated the Drylea name with the one style of umbrella frame. The executives of the company were not convinced, however, that the advertising *per se* had brought about the improvement in sales.

Early in 1925 the company decided to discontinue the advertising plans because of style elements which had unexpectedly entered into the demand for frames. No longer were the 25-inch and 27-inch frames with 7 or 8 ribs popular. A large demand had arisen suddenly for frames with 12 to 16 ribs, 19 to 20 inches long.

The popularity of Japanese parasols, which had been imported into this country in large quantities, the vogue of bobbed hair and small hats, and the convenience of an umbrella that could be packed in a suitcase were the reasons advanced for the sudden demand for the new type of umbrellas.

The management, realizing the trend toward a new style of frames, perfected a frame on which every piece of metal which had been exposed on the old-style frame was covered by a wood or composition material. The company secured orders on the new style of frame sufficiently large at fair prices to operate its plant at capacity.

By December, 1926, however, competitors were producing the new-style frame in quantity, and price cutting appeared. The executives of the company considered at this time whether it would be advisable to start advertising a second time.

COMMENTARY: It is believed that the Hartley Company was not justified in advertising its umbrella frames to consumers.[2] The following considerations, it is true, might have indicated that advertising to the ultimate consumer would be helpful: (1) The Drylea frame was superior to many frames on the market. (2) The frame is such an important part of an umbrella and the variation in quality of frames used in umbrellas was wide enough possibly to have led consumers to discriminate in favor of umbrellas with Drylea frames, once they knew of their advantages. (3) As pointed out in other cases on the advertising of fabricating parts and materials, advertising a fabricating part gives opportunity to retail salesmen to trade upon the recognition which has been gained for the part. (4) A temporary advantage might have been attained through the fact that manufacturers and retailers apparently are influenced frequently by the fact that an article is advertised to consumers; in this instance no other frame manufactured in the United States was thus individualized through advertising.

On the other hand, umbrellas are articles of only sporadic purchase, involve a relatively small consumer investment, and lack appeal to strong selective buying motives which might lead to any high degree of discrimination on the part of the consumer. The company, although large in its field, was relatively small, and the volume of business which it had or which it might have stimulated was not sufficient to justify a very large advertising appropriation. In order to establish the merits of the frame as a means of bringing about a brand discrimination, a long campaign of considerable size would have been necessary. Since the buying motives and shopping habits of consumers would tend to operate against development of any substantial degree of discrimination, even with a large advertising appropriation, it is believed that the company was not justified in undertaking such a campaign.

February, 1928 N. H. B.

[2] See also Rubber Wire Company, page 482.

Tiber Body Company[1] (B)

MANUFACTURER—BUS BODIES

ADVERTISING—*Use of Consumer Advertising for Fabricating Part.* The company, a manufacturer of bodies for motor busses, advertised its product in trade papers for bus operating companies, although in most instances it sold its product, as a fabricating part, to bus manufacturers rather than to bus operators. The question of whether this advertising should be continued was raised.

(1926)

The Tiber Body Company started to manufacture automobile bodies in Detroit in 1919. In 1923 the company experimented in designing and building a distinctive body for automobile busses, and in 1924 shifted manufacturing operations entirely to the building of bus bodies. While building bodies for pleasure cars the company never had advertised. Late in 1923, however, it started to advertise its bus bodies in trade papers which reached bus operating companies and electric railway companies, although not these companies but bus manufacturers were its customers for bus bodies. The advertising copy was intended to create an atmosphere of quality and distinction. In 1926 officials of the company deliberated as to whether to continue advertising, and, if so, how much to spend and what appeals to emphasize.

Officials of the Tiber Body Company had had long experience in designing and building bodies for vehicles. This experience extended back to the building of horse-drawn vehicles. The officials always had been associated with companies which made bodies of recognized quality. A few years prior to 1919 they had organized the Tiber Body Company and had constructed a modern factory to build automobile bodies. War operations had interfered, so that actual production did not start until 1919. One of the officials acted as the only salesman of the company.

The company had transferred its operations from the building of bodies for pleasure cars to the building of bodies for busses in order to take advantage of the increasing demand for busses and in order to enter a field where it could individualize its product. Several companies making pleasure cars manufactured

[1] Fictitious name. See also Tiber Body Company (A), page 69.

the bodies for those cars or were affiliated with body building companies. This had limited the market of the independent manufacturers of car bodies.

Those automobile companies which did purchase bodies usually designed the bodies they wanted and submitted the designs to builders for bids on orders for a specified number of bodies. Although price was not always the determining factor in placing orders, the Tiber Body Company after 1920 had increasing difficulty in securing orders except at prices which allowed only a narrow margin of profit. Sales of the company, which had amounted to over $2,500,000 annually prior to 1921, dropped to $975,000 in 1921. In 1922 sales totaled $2,330,000, and in 1923 sales totaled $1,855,000. The size of the company did not, in the executives' opinion, allow it to make an appropriation for advertising in general national periodicals in an attempt to establish consumer recognition for Tiber bodies.

In the bus transportation field in 1923 and 1924, conditions were unsettled; the use of busses had increased rapidly since 1920, and by 1923 bus lines had been established in almost every section of the United States. The few manufacturers of bus bodies were unable to meet demands for deliveries. The leading manufacturers of chassis for busses were truck manufacturers who had had little experience in passenger body design. Bus bodies in general were of two types: the street car type, for city transportation, and the sedan, or parlor car, type for interurban transportation. There was little uniformity in designs or quality of the bus bodies which were being sold. Officials of the Tiber body Company believed that there was an opportunity for the company to enter the bus body field by developing a high-quality, comfortable, and distinctive bus body of the sedan, or parlor car, type, the appearance of which would increase the salability of any truck chassis on which it was mounted. They also believed that improved bodies would increase the popularity of transportation by bus.

After the company had designed and constructed a sample body for long-distance bus transportation, the sales official selected five truck manufacturing companies which he considered as leaders, and by personal interviews with executives succeeded in obtaining initial orders which equaled the 1923 total sales of bodies for pleasure cars. The company transferred manufactur-

ing operations entirely to bus bodies in 1924, with the exception of work on a few uncompleted contracts for bodies for pleasure cars. The bus bodies were sold to truck manufacturers at prices ranging between $2,500 and $3,500, the amount depending on the upholstery and interior finish ordered. The prices were somewhat higher than prices of bus bodies for similar service manufactured by competing companies. A few body building companies had a larger capacity than the Tiber Body Company, but those companies made street car type bus bodies as well as parlor car type. The Tiber Body Company had a capacity as large as, or larger than, any competitor specializing in parlor car type bodies.

The new Tiber bus body had been exhibited at an electric railway convention in 1923. The cost of exhibiting and of placing a few full-page advertisements in trade papers in the latter part of 1923 amounted to $7,000. Advertising in 1924 had cost $14,400, and sales of bus bodies in that year had totaled $2,390,000. Sales of pleasure car bodies on uncompleted contracts that year amounted to $280,000. The advertising in 1924 had consisted of full pages in trade papers for electric railway and bus operating companies. These advertisements emphasized the long experience of the company's officials in body building, the quality and durable construction of Tiber bodies, and the fact that the company had secured large orders from well-known truck manufacturers.

In 1925 the advertising appropriation was increased to $17,000, and the appeals used were definitely those designed to create an impression or atmosphere of high quality and luxury associated with Tiber bodies. Comfort and convenience for passengers, luxury and beauty of interior appointment, pleasing exterior appearance, all were featured as points which would assist the bus operator in increasing his patronage. The advertising copy was prepared for the Tiber Body Company by a company which published technical and trade papers. The advertisements appeared in three periodicals. These three papers covered the bus operating field, the electric railways, and the steam railroads. Representatives of the publishing firm in consultation with officials of the Tiber Body Company had suggested the appeals for the company to use and had arranged all details of the advertising. The publishing firm charged the company its regular rates for space in its publications plus an additional charge for art work

and plates. The officials of the Tiber Body Company, after agreeing each year to the general advertising plans outlined by the publishing firm, had only to decide the amount the company should spend in advertising.

The Tiber Body Company officials had no measure of the effectiveness of their advertising. They were of the opinion that the company would have secured the same sales total in 1924 and 1925 if it had done no advertising, yet they favored continuance of advertising as a means of establishing a recognition of quality and a future independence of truck manufacturers. Representatives of the publishing firm pointed to the fact that there had been a 23% increase in sales of 1925 over 1924 as evidence of effective advertising. The publishing house, in 1926, recommended an increase in advertising appropriation and suggested three propositions. One, which did not call for a large increase in appropriation, proposed to continue full-page advertisements in the three papers at a space cost of $11,350, at a cost for art work and plates of $3,300, and at a cost for reprinting and mailing of reprints to a list of 3,300 bus operating companies of $950. Another plan proposed double-page black-and-white spreads at a space cost of $16,150, an art and plate cost of $3,460, and reprinting and mailing cost of $1,050. The third plan proposed full-page color inserts at a space cost of $16,150, art work and plates at $4,950, and reprinting, special paper, and mailing at $5,400. The appeals to bus operating companies of luxury and comfort as a means of increasing patronage were to be continued.

The sales of the Tiber Body Company, in 1925, amounted to $2,950,000. The cost of the finished products amounted to 78.9% of sales, leaving a gross margin of 21.1%. Selling, administrative, and general overhead expenses of $204,000 amounted to 6.9% of sales, leaving an operating profit of 14.2% and a net profit of 10.7%. The selling, administrative, and general expense total was made up as follows:

Salaries of officers and clerical force	$130,240
Directors' fees	1,590
Advertising	17,000
Exhibiting expenses	14,230
Travel and entertainment	12,380
Corporate taxes	2,400
Telephone and telegraph	7,500
Stationery and office supplies	4,300
Legal and professional services	5,500

Membership and subscriptions	640
Postage	1,220
Depreciation of furniture and fixtures	1,950
Repairs and maintenance	210
Credit insurance	2,420
Miscellaneous	2,420
Total	$204,000

On the basis of sales in the first three months of 1926, the Tiber Body Company officials estimated that total sales in 1926 would exceed $3,300,000.

Three or four competitors of the Tiber Body Company were advertising with single-page or double-page spreads in the same publications used by the Tiber Body Company. Their appeals, in general, were: long experience in body building, employment of expert designers, durability of the body, appearance of the body, and general claims of leadership in the industry.

By the end of 1925, three truck manufacturing companies practically had adopted Tiber bodies as standard equipment for their busses. Two other truck companies which themselves manufactured bodies for their busses had placed large orders for Tiber bodies. The advantage to truck manufacturers of standardizing on one make of body was the assurance of uniform quality and of responsibility on the part of the builder. Purchasers of busses always came back to the truck manufacturer in case of defects or unsatisfactory service either of the truck chassis or body. Several trucking companies at first had equipped their chassis with bodies manufactured by the company that offered the best delivery service or with bodies which had the seating capacity or design requested by bus operating companies. During 1923 and 1924 there had been little uniformity in seating capacity. Bus operating companies differed in their ideas of the most desirable capacity of busses. During 1925, however, manufacturers and operators began to accept certain capacities as standard for each type of bus. In the street car type, for example, the capacity most favored was 25 seating capacity, with room for 15 standing.

The bodies manufactured by the Tiber Body Company were distinctive, and with minor changes could be mounted on the chassis of any leading truck manufacturers. Truck manufacturers sometimes requested minor changes in the body appearance, but ordinarily they recognized the superior design of the Tiber standard body and purchased the bodies in the standard

type. Bodies could be ordered finished in different colors and furnished with different qualities of leather upholstery and interior finish.

Some bus body manufacturers specialized in building custom-made bodies for bus operating companies which wished their bus designs to differ from those of others. Although the Tiber Body Company wished to maintain its bodies as distinctive and to have them identified with the company, it sometimes accepted orders for special body designs. In these instances it filled the first order on a cost-plus basis, then determined on a price at which it would fill further orders for the special body. The company did not encourage orders for special designs from bus operating companies. The officials believed the logical sales outlet for bus bodies was truck chassis manufacturers who purchased the bodies and resold them as part of assembled busses. The truck companies maintained branch sales and service offices in all principal cities and assumed the credit risk and installment financing common in sales of busses to operating companies.

The experiences of one truck manufacturing company are illustrative of the difficulties resulting from lack of standardization by truck companies on one make of body. That truck company prior to 1925 had purchased bodies from five builders and had had various difficulties because of servicing the bodies and because of lack of uniformity in design. In one instance a street railway in placing an order for ten busses had insisted that the chassis be equipped with bodies manufactured by a body maker with whom the truck company never had dealt. The truck company purchased the bodies from that builder, but after a month's operation the bodies proved to be frail. The truck company, in order to maintain its reputation, had to have the bodies repaired and rebuilt. It adopted a policy thereafter of standardizing on Tiber bodies as equipment for its chassis. The chassis made by the company ranged in selling price from $5,500 to $7,000 and it sold the bus bodies mounted on chassis at prices ranging from $3,500 to $5,000. The truck company expected about a 25% profit on the bus bodies.

Salesmen of this truck company used the reputation of the Tiber Body Company as a selling point for the chassis. They stated that the advertising by the Tiber Body Company frequently assisted in making sales of the Tiber body equipped

trucks. In a few instances, however, street railway companies had wanted bodies built by a company which also built street car equipment. In these instances the street railway companies had purchased only the chassis from the truck company and had ordered bodies directly from body manufacturers. In one instance, furthermore, the truck company had lost a large order for busses for an interurban electric railway because the president of a body company competing with the Tiber Body Company had visited the president of the electric railway and persuaded him to insist on the body which competed with the Tiber body. Since that truck company had adopted Tiber bodies as standard equipment and never had purchased from the competing body company, it was unable to secure the order.

Officials of the Tiber Body Company believed that the trend in bus operation was toward consolidation of small companies into large operating companies and toward extensive operation of busses by electric and steam railways. This trend might lead to more extensive recognition of advertised standard bus bodies as separate from chassis and to insistence by the operating companies upon their favorite bus bodies as equipment upon any chassis they might purchase, or it might lead to the habit on the part of large bus operating companies of specifying custom-made bodies.

COMMENTARY: The chief issue involved in this case was whether the Tiber Body Company should use advertising in an attempt to build up a brand reputation for its product, a fabricating part, as a means of attracting and holding the patronage of bus manufacturers. Subsequent issues involved the strategy to be used in such a program.

As a manufacturer of bodies for pleasure cars, the Tiber Body Company had been employed in a highly competitive, undiversified, and, accordingly, risky business. In changing to the new field of building bus bodies, the executives might well have expected eventually a development of the same competitive conditions that existed in the pleasure car field. On the other hand, by entering the business of building bus bodies in the early stages of bus transportation, the Tiber Body Company had an opportunity of helping to develop body building and of individualizing its own product. By so doing it might hope to avoid extreme competition. At the time there was need for establishing definite standards of quality in bus body building. Since the company was in a position to take advantage of these opportunities of building a fine product, it was a question whether the force

of advertising could be used so to impress the name and qualities of the product upon the purchasers of busses that they would prefer busses with Tiber bodies.

It is to be noted that in the early stages the advertising which was undertaken by the executives of this company probably had little or no effect in attracting business to the company. Orders were secured on the basis of the previous reputation of the company and the sales ability of one of its executives. The advertising clearly was undertaken as a long-time sales force to help the company avoid the severe competition and the fluctuation of patronage that had characterized its experience in the pleasure car field.

The company's problem primarily was to attract and hold the patronage of bus manufacturers, although there also was opportunity to induce bus operators to specify Tiber bodies when purchasing busses. The case is similar to others involving the advertising of fabricating parts or materials to purchasers of the final products rather than only to the manufacturers who incorporate such products in their goods. The success of such programs seems to turn largely on the importance of the fabricating part in furnishing buying motives for the product in which it is to be incorporated.[2] The body was such an important part of the bus in the eyes of bus transportation companies that superior qualities of the body undoubtedly furnished strong buying motives for the purchase of busses. Involved in the Tiber bus bodies were characteristics such as appearance, durability, and comfort, which could play an important part in attracting patronage to busses. Thus, the Tiber Body Company had opportunity to appeal to the bus operators on the strong motives of increasing sales or earning power, of dependability in quality and in use, and of durability. In so far as such efforts to individualize its bodies and to build a favorable reputation for them among bus users were successful, the company had a means of attracting and of holding the patronage of bus manufacturers, inasmuch as the latter could use the reputation of Tiber bodies to increase the salability of their products.

The cost of reaching the right prospects among bus operators through trade paper advertising involved a relatively small expenditure, about .6% of sales in 1924 and 1925. Moreover, the limited number of desirable mediums going to purchasers of busses, those whom the company desired to influence, prevented the advertising expenditure from becoming large.

No method of definitely evaluating such advertising of fabricating goods to consumers has been or probably can be devised. In this case, the fact that the fabricating part was of such large importance in the finished product and that the cost of the advertising was small

[2] See Barbour Welting Company, 2 H.B.R. 176; Rubber Wire Company, page 482; Manly Elastic Company, page 433; Hartley Company, page 465.

probably justified the company in its effort to individualize the product through the aid of advertising to bus operators. This advertising was merely a stratagem to furnish additional buying motives for bus manufacturers to purchase Tiber bodies. Accompanying such an advertising program would have to be sound designing and production and intelligent selling and service to the bus manufacturers.

In its advertising to bus operators, the company was utilizing one of the strongest buying motives for industrial goods; namely, increase of sales or patronage and hence of earning power. Which advertising program the company should have undertaken in 1926 depended upon a more intimate study of the copy effects possible under each and a further study of competitors' efforts than is possible from the statements contained in the case. The aim should have been adequately to present those appeals which would be most likely to impress and motivate bus buyers and bus manufacturers in the selection of Tiber bodies.

July, 1926 N. H. B.

Rubber Wire Company[1]

MANUFACTURER—INSULATED WIRE

ADVERTISING—*Use of Distributor Advertising for Fabricating Part.* In advertising a small insulated cord which it manufactured for use with household and office electrical appliances and for extensions, the company had to decide whether to direct its appeal to manufacturers of electrical appliances using the cord as a fabricating part, to electrical wholesalers, contractors, and retailers, or to users. The company decided to direct its advertising to distributors in an effort to secure the replacement business and to induce the distributors to influence the manufacturers to use its cord.

(1926)

The Rubber Wire Company, of New York, developed in 1921 a type of flexible rubber insulation which had unusual wearing qualities. It would resist action from acids, oil, or water. The insulation was applicable to wires for three groups of uses. First, a field existed for portable cables in coal mines, quarries, and shipyards, in the contracting building field, and wherever flexible portable cables were necessary in connection with electrical machines and apparatus. Second, a smaller insulated portable wire cord had an extensive field for use with small electrical tools and extension lamps in factories, machine shops, and repair shops, where the extension cord was subject to hard usage and frequent exposure to acids, oil, and water. Third, the company recognized an extensive field for small insulated cord to be used with household and office appliances and extensions.

From 1921 through 1925 the company had concentrated its advertising and sales efforts principally on portable cables and cords for industrial use in the first two fields. It had succeeded in establishing a reputation for its products in the industrial fields. In 1926 the company planned to advertise the rubber insulated cord for use on household and office appliances. The advertising manager deliberated as to whether to direct his advertising to manufacturers of electrical appliances, to electrical wholesalers, contractors, and retail stores, or to users of household and office appliances.

The Rubber Wire Company for over 20 years had manufactured various types of insulated wire cord and cable. It had

[1] Fictitious name.

developed several types of insulation for use under special conditions and to each type it had given a trade name which could be used in advertising. The rubber insulation developed in 1921 had many virtues which the usual braided cotton and hemp insulated wires did not have. The construction of the insulation was similar to that of a cord tire. The rubber covering of the wire was of a special compound which did not absorb water, did not kink, and was from four to ten times as durable as the average wire with braided insulation. The new insulation was not patentable. Imitations of the new wire appeared some months subsequent to its introduction by the Rubber Wire Company. The company named its new insulation "Rub-Wear" and it standardized its production of the insulation to three groups of wires and cables which it called "Rub-Wear portable cable," "Rub-Wear portable cord," and "Rub-Wear appliance cord." It manufactured Rub-Wear portable cable for use in mines and other industries using heavy cables, in 17 sizes for either 1, 2, 3, or 4 copper conductors; Rub-Wear portable cord for use in factories, machine shops, and repair shops in 5 sizes for either 2 or 3 conductors; and Rub-Wear appliance cord in 2 sizes of 2-conductor cord for use on household and office appliances and light extensions.

The sales organization of the Rubber Wire Company consisted of the home office and five branch offices located in certain of the principal cities of the United States. The home office and the branches at Chicago and at San Francisco carried stocks; other branches did not. Branches sold the company's products direct to central stations, to electrical wholesalers, and to a few large manufacturing companies. The company would sell its products to any electrical wholesalers, contractors, contractor-dealers, or consumers who wished to purchase. It protected electrical wholesalers, however, by offering them larger trade discounts than it offered to retailers.

In the case of stock products, such as small portable cables and insulated cords, most of the sales were made through selected electrical wholesalers who agreed not to carry products competing with the Rubber Wire Company's lines. The company granted to these special distributors an extra discount. About 40 of these special distributors, for example, purchased from the Chicago branch, and these distributors sold the company's products to electrical contractors, contractor-dealers, and retail electrical

stores. These 40 distributors were so located as to cover practically every city and town throughout the Middle West. The wholesale distributors, for the most part, were wholesale electrical supply firms, although in a few instances they were hardware wholesalers, machinery supply firms, and mine supply firms. In addition to selling through its own branches and wholesale distributors, the Rubber Wire Company had seven manufacturers' agents located in the more distant territories of the United States. These agents sold the company's products on a commission basis to wholesalers, contractors, central stations, and to large manufacturing companies. They usually sold two or more other allied types of products, such as transformers or switchboards.

After the introduction of the new insulated rubber wire in 1921, the company first had directed its efforts to the sale of Rub-Wear portable cables. The principal market for these cables was in the coal-mine fields. These fields at that time were covered by manufacturers' agents, and in some instances by electrical wholesale firms.

The company advertised extensively in *Coal Age,* circularized the coal mines with mail material descriptive of the new cable, and sent specialty salesmen to visit mine superintendents and mine electricians in order to demonstrate the qualities of the new insulation. It also sent descriptive material to state mine inspectors, who were responsible for the inspection of the measures taken by mines to promote the safety of workers. Although these mine inspectors were not prospective purchasers of the portable cable, they, in many instances, mentioned the safety advantages of the Rub-Wear cable to mine superintendents.

After the introduction of the cable to the mines, the company appointed in each district a mine supply firm as its wholesale distributor in order that supplies of the cable might be at hand for quick delivery to the mines. After the introduction of the Rub-Wear portable cable had proved successful, the company had concentrated its efforts on Rub-Wear portable cord for use in industrial fields. It had advertised the portable cord to the electrical trade in such technical publications as the *Electrical World.* It also advertised to some extent to machine shops and factories through *The American Machinist.* In addition to this advertising, the company had adopted a campaign of circularizing selected lists of the larger prospective users of the cord. The circular let-

ters had described the product and enclosed a stamped return post card requesting a sample. When inquiries were received, the company had sent a workable sample of about 15 feet of cord to the inquirer, and had turned the inquiry over to the electrical wholesaler who carried a stock of the company's cord in that territory. This method had resulted in what the company considered successful and favorable distribution of the Rub-Wear portable cord throughout the United States. The effect of the advertising campaigns in increasing sales had occurred about six months after the advertising had started.

By 1925, therefore, most electrical wholesalers, central stations, and many contractors and contractor-dealers throughout the United States were familiar with the name "Rub-Wear." Although during this period the Rub-Wear appliance cord had been manufactured, it had not secured extensive distribution, since most of the advertising and sales efforts had been directed toward the sale of the Rub-Wear portable cable and portable cord. The company sought, therefore, to concentrate its efforts in 1926 on the distribution of Rub-Wear appliance cord.

The company determined that the Rub-Wear appliance cord was specially adapted for use with washing machines, vacuum cleaners, dishwashers, desk fans, radio sets, battery chargers, refrigerators, office equipment such as electrically operated accounting machines, and for all sorts of extensions to floor lamps, drop lights, and even telephone desk extensions. It was not applicable, however, to portable electric irons, toasters, or other heating appliances, since the National Board of Fire Underwriters required a special type of cord for these appliances and since the Rub-Wear insulation would be injured if it came into contact with a hot object.

There were three markets to which the company could direct its advertising efforts. It could advertise the product as a fabricating part to manufacturers of household and office appliances; it could advertise the product to retail dealers, contractor-dealers, central stations, and electrical repair men; or it could appeal directly to the consumers who, in this instance, were either office executives and clerks or women in their homes. Since the total annual advertising appropriation of the company was only about $40,000, however, the large cost of consumer advertising practically eliminated from consideration any direct appeal to con-

sumers. The average householder, moreover, would buy cord separately from appliances only infrequently, so that the company doubted the wisdom of direct consumer appeal.

The advertising manager of the company was of the opinion that the company should advertise to electrical wholesalers and retailers, that it should build the advertising up on the already established reputation of Rub-Wear portable cords, and that it should emphasize the service uses of the appliance cord rather than its decorative uses.

Consumers had become accustomed to silk-covered cords for floor lamps and other extensions where the cord was visible. The advertising manager feared that the smooth rubber surface of Rub-Wear cord, in spite of the fact that it could be produced in almost any color, would not meet with approval for use on extensions around the home. He believed, however, that after women had used vacuum cleaners and other household service appliances which were equipped with Rub-Wear cord, and after they had learned from experience that Rub-Wear cord did not kink, fray, or absorb moisture or dirt, the prejudice in favor of the silk-braided cord for other household uses gradually would disappear. Manufacturers of silk-braided cord in their advertisements to wholesalers and retail dealers frequently showed the use of the cord on floor lamps and other electrical furnishings in well-furnished homes.

The advertising manager believed, also, that the appeal to electrical wholesalers and retailers, who already were familiar with Rub-Wear insulation, would be more effective than any appeal directed entirely to appliance manufacturers. Appliance manufacturers appeared content to equip their appliances with a cheaper cord so long as no pressure was exerted for a better quality cord by consumers and dealers. The company had experienced this situation when it attempted to introduce Rub-Wear portable cable in the mining fields. It first had gone to manufacturers of portable mining apparatus with expectations of getting these manufacturers to equip their apparatus with Rub-Wear cable. The company had found these manufacturers unwilling to use the high-quality cable so long as mine operators were content to purchase the apparatus equipped with inferior cable. When, however, the Rub-Wear cable had been introduced to the mine superintendents and electricians and its superior qualities

had been demonstrated, the mines began to request that apparatus come equipped with Rub-Wear cable. The result had been that most of the apparatus manufacturers who first had refused to use the cable later adopted it as a standard part of their equipment.

The company had been able through direct sales efforts to induce a few manufacturers of household equipment, such as vacuum cleaners, to equip their machines with Rub-Wear appliance cord. The price of Rub-Wear appliance cord was about the same as that of a high-quality silk-covered cord. There were, however, numerous inferior cords which were sold in some instances at about half the price of Rub-Wear.

The advertising manager believed that by advertising to the wholesale and retail electrical trade the company indirectly could exert sales influence on manufacturers of electrical appliances. He held the opinion that if retail dealers and repair men stocked the Rub-Wear appliance cord and through experience demonstrated that the use of the Rub-Wear cord in repair work reduced cord failures and, consequently, complaints from customers, these dealers and their satisfied customers would exert an increasing pressure on appliance manufacturers to equip their appliances with Rub-Wear cord. The advertising in electrical trade journals, such as *Electrical Merchandising,* would reach both the designing men and the advertising managers among manufacturers of electrical appliances. The men in charge of designing and improving the appliances frequently determined or specified the equipment to be provided with the appliances, although the purchasing agents of the companies did the actual purchasing. The advertising managers would notice the advertisements, since the manufacturing companies also advertised their appliances in the same publications. If the Rubber Wire Company stressed in its advertising to wholesalers and retailers the features of the cord which would increase the salability of appliances, the advertising managers of the appliance manufacturers would become interested.

The advertising manager decided to develop a series of 10 advertisements which would emphasize the service features of Rub-Wear appliance cord. He planned to place this series in 10 consecutive weekly issues of *Electrical World,* to place the 3 advertisements which he considered most effective consecutively

in 3 monthly issues of *Electrical Merchandising*, and to place 6 of the advertisements in 6 bimonthly issues of the *Journal of Electricity*. If at the end of that time this advertising brought in a satisfactory number of inquiries, he planned to continue the series with new copy of the same general theme.

The December 31, 1925, A.B.C. statements of circulation and trade distribution of subscribers for the publications *Electrical Merchandising, Electrical World,* and *Journal of Electricity* are shown in Exhibits 1 and 2.

The advertisements were to be full page, and the advertising manager planned to use in each advertisement a picture covering about one-half a page. Each picture was to illustrate some service use of Rub-Wear cord, either in the household or in the office. Somewhere about the borders of the page the advertising manager planned to use 10 small cuts, about one inch square. The cuts would illustrate the use of Rub-Wear cord on a washing machine, a vacuum cleaner, a large stationary electrical ironer, a sewing machine, drop lights in an office, a desk fan, a dictaphone, a refrigerator, a dishwasher, a student's portable desk lamp, and a radio. In addition to the cuts, the advertisements were to contain text describing the uses and advantages of the cord, and a paragraph which would state that the appliance cord was made exactly like the Rub-Wear portable cord.

EXHIBIT 1

GEOGRAPHICAL DISTRIBUTION OF CIRCULATION OF "ELECTRICAL MERCHANDISING," "ELECTRICAL WORLD," AND "JOURNAL OF ELECTRICITY"*

Geographical Districts	*Electrical Merchandising* December, 1925	*Electrical World* November 28, 1925	*Journal of Electricity* December 15, 1925
	(Copies)	(Copies)	(Copies)
New England	1,211	1,540	37
Middle Atlantic	4,095	5,087	118
South Atlantic	779	1,293	22
East North Central	2,936	3,522	84
East South Central	312	450	6
West North Central	1,367	1,513	33
West South Central	402	634	17
Mountain States	392	584	394
Pacific States	1,217	1,367	4,867
Canada	393	611	36
Miscellaneous and Foreign	[591	1,823	88
6 Months' Average of Total Net Paid Circulation	13,312	18,402	5,460

**Standard Rate and Data Service,* February, 1926.

EXHIBIT 2

TRADE DISTRIBUTION OF "ELECTRICAL MERCHANDISING," "ELECTRICAL WORLD," AND "JOURNAL OF ELECTRICITY"*

MAGAZINE	DISTRIBUTION	
Electrical Merchandising	Copies	Percentage
Stores operated by electric light and power companies, their appliance sales managers, salespeople, etc.	2,389	17.8
Electrical contractors and contractor-dealers	4,358	32.3
Electrical dealers and nonelectrical retailers, department stores, hardware stores, etc., selling electrical merchandise	2,475	18.3
Electrical jobbers and jobbers' salesmen and manufacturers' agents	2,154	16.0
Manufacturers and their salesmen	1,215	9.0
Newsdealers, booksellers, and miscellaneous	594	4.4
Not yet classified	295	2.2
Total	13,480	100
Electrical World		
Electric light and power companies—		
Executives, installation, operating and commercial men	9,091	49.48
Engineers engaged in consulting and special work—		
Consulting electrical engineers, telephone and telegraph, government, mechanical, civil and illuminating engineers, and chemists and engineers in electrical testing laboratories	1,662	9.05
Industrial and electrical manufacturing executives and engineers—		
a) With electrical manufacturing companies 1,849		
b) With industrial works, mills, and factories 2,328	4,177	22.73
Engineers and others engaged in contractors' and sales work—sales engineers with electrical manufacturing companies, electrical contractors, and electrical jobbers and exporters	809	4.40
In allied activities—		
Financiers, bond houses, patent lawyers, public service commissions	811	4.41
Engineering colleges, professors, instructors, students	1,023	5.57
News-stands, booksellers, miscellaneous	322	1.75
Connections unknown (subscribers who have not yet reported their business or position)	479	2.61
Total	18,374	100
Journal of Electricity		
Electric light, power, and railways	3,568	62.58
Contractors, dealers, and jobbers	955	16.75
Electrical engineers	173	3.03
Manufacturers and sales agents	464	8.14
Industrials	226	3.96
Libraries, schools, etc.	216	3.79
Financial, miscellaneous, and unclassified	100	1.75
Total	5,702	100

**Standard Rate and Data Service*, February, 1926.

The advantages to be stressed were cleanliness, freedom from dust and fraying, smooth outer surface, light weight, resistance to water and acids, inability to kink, and long life. An additional feature of the cord which the company did not plan to stress in advertising was the increased protection from short circuits and fires. Statistics by insurance companies indicated that many fires resulted from the use of light extension cords by persons who did not take proper insulation precautions. Persons frequently kinked the cords, fastened cords on metal hooks, or allowed frayed cords to go unrepaired. Rub-Wear cord reduced this fire risk because of the durability of the insulation and because the insulation did not crack when exposed to long wear under conditions which would kink and crack cords of poorer quality.

In one corner the advertisements were to contain a coupon requesting data and a sample of the cord, and stating the name of the inquirer, his address, title, and the company which he represented. At the bottom of the advertisements were to appear the name of the Rubber Wire Company and the location of its branch offices. The advertisements were to make no mention of wholesale distributors or agents.

The advertising manager expected to send, in answer to each inquiry, a sample of Rub-Wear appliance cord about six feet long. He considered that six feet of cord would be a workable sample. He would turn over all inquiries to a wholesaler in the territory from which the inquiry came.

The advertising manager planned a pamphlet or sales prospectus which would include reprints of the 10 full-page advertisements along with other information regarding the Rub-Wear appliance cord. When the first of the series of advertisements appeared, the advertising manager planned to send copies of the sales prospectus to all wholesalers and to central stations and other customers who had purchased goods from the company directly. He planned to send this material not only to wholesalers who regularly purchased from the company but also to wholesalers who stocked the products of competing companies. In addition to this, he planned to send letters including stamped return post cards and descriptive material to a mailing list of about 4,000 contractor-dealers and 2,700 central stations. Samples of the cord were to be sent to all who returned the post cards,

and a follow-up letter was to be sent once a month for six months.

After the campaign just described had been in operation three months, the advertising manager believed that the interest shown in the product as indicated by inquiries justified a continuance of the campaign another three months. The company did not keep a tabulated record of inquiries resulting from the trade paper advertising. The inquiries were placed in a follow-up file along with inquiries from direct-mail advertising. The company did, however, keep a record of returns from the circulars. On the first letter, for example, which the company sent to a list of 4,000 contractor-dealers, there were received, within a month after the letter was mailed, 120 requests for samples, 24 requests for more definite information on prices and terms of sale, 30 requests for descriptive folders for distribution with the dealers' names imprinted, and 5 returns from persons not seriously interested.

Examples of the trade-paper advertisements used in the first three months of the campaign follow.

(Cut of a man dictating to dictaphone)

SAVING VALUABLE MOMENTS WITH
RUB-WEAR APPLIANCE CORD OFFICE EQUIPMENT

Nothing interrupts business today more than a dictaphone out of order because of frazzled cord, a fan that fails when the temperature rises, a desk light that needs repairing, an adding machine that needs a new cord, and a drop light that simply won't work. These, however, represent the conditions of yesterday. Today leading manufacturers are making their business appliances fool-proof by equipping them with Rub-Wear Appliance Cord.

Rub-Wear Appliance Cord is made exactly like Rub-Wear Portable Cord, the only difference being that Rub-Wear Appliance Cord is listed only in sizes No. 16 and No. 18 and that it is lighter in weight and smaller in diameter.

This cord is absolutely the best investment possible for the maker of desk fans, dictating, calculating, and similar business appliances. For drop lights, extensions and general use around the office, it supplants the old-fashioned flexible cord to the entire satisfaction of manufacturer, jobber, dealer, and user.

Electricians of large buildings who must repair business appliances say that Rub-Wear Appliance Cord cuts their work in half. One repair with Rub-Wear Appliance Cord does a job that will last for years.

Send for a sample of Rub-Wear Appliance Cord—the cord that says "goodbye to service costs."

To Help Sell Battery Chargers and Sets! Rub-Wear Appliance Cord

Another popular use for Rub-Wear Appliance Cord is on battery chargers and for permanently connecting radio storage batteries. The salesman who can point to Rub-Wear Appliance Cord as a selling feature of battery charger—has all of the customer's attention, as every radio fan knows how the ordinary flexible cords of chargers soon are eaten through by the acid from the battery.
Rub-Wear Appliance Cord is made exactly like Rub-Wear Portable Cord, the only difference being that Rub-Wear Appliance Cord is listed only in sizes No. 16 and No. 18 and that it is lighter in weight and smaller in diameter than the Rub-Wear Portable Cord.
Rub-Wear Appliance Cord is immune against acid solutions, thus making it the choice of battery charger manufacturers.
For all electrical portable cord devices, except heating appliances, not requiring Rub-Wear Portable Cord, Rub-Wear Appliance Cord is the preferred cord.

Our new pamphlet and a sample piece of Rub-Wear Appliance Cord will be mailed upon request. Mail us the coupon today.

Commentary: The Rub-Wear appliance cord, a fabricating part, had its largest market among manufacturers of electrical appliances. At the same time, it had a market through the regular channels of trade to consumers as a replacement part. In its advertising and sales promotion work the Rubber Wire Company had the problem often met by manufacturers of fabricating materials and parts; namely, to overcome the resistance of manufacturers who might incorporate the fabricating materials or parts in their products.[2]

The decision of the company not to advertise Rub-Wear appliance cord to consumers was sound. It would have been valuable, no doubt, to have had housewives acquainted with the special characteristics of the cord, as a means of helping to meet the competition from silk-covered cord. The replacement market for such a product, however, was comparatively small. The part itself was bound to have relatively a small place in the consumer's mind as a part of any electrical appliance. In other words, it would have been difficult to create brand identification and discrimination on the part of the consumer for the cord as a part of an electrical appliance. The consumer would have been inclined to accept any cord offered on an appliance and to hold the dealer or the manufacturer responsible for satisfactory performance. Moreover, it would have been difficult to carry identification of the cord to the final product, especially after competitors adopted this type of insulation. Finally, the large appropriation that would have

[2] See Barbour Welting Company, 2 H.B.R. 176; Manly Elastic Company, page 433; Tiber Body Company (B), page 473; Hartley Company, page 465.

been necessary to make any impression on the consuming public clearly ruled out such an approach.

The issue, then, came to the question of the advisability of directing advertising to electrical wholesalers and dealers in order that dealer influence might be brought to bear on the manufacturers of electrical appliances to use Rub-Wear appliance cord.

In advertising to electrical wholesalers, contractors, and dealers the company was advertising itself as a source for a new, distinct, and dependable type of product for which there existed a replacement market. In its advertising plan, the company was attempting to secure this market with the trade as well as indirectly to gain the fabricating market. In so far as the Rub-Wear appliance cord became recognized as a dependable and superior product in the electrical trade, to that extent was the company paving an approach to the manufacturers of electrical appliances and cutting down their sales resistance. Other cases which have come to the writer's attention indicate that dealers can exert considerable influence in inducing manufacturers to adopt certain fabricating parts. This case, then, illustrates the policy of promoting a fabricating product to the trade, ostensibly to secure the direct replacement demand, but also to bring an influence to bear on manufacturers who might incorporate the goods in their products. Such a program, of course, supposes that every opportunity of selling the product to manufacturers will be taken and that the advertising will be utilized as a sales weapon.

It is to be noted from an analysis of the mediums selected that not only were the electrical wholesalers, retailers, and contractors reached, but, in addition, especially through the *Electrical World* and the *Journal of Electricity,* engineers and executives of many types of industrial plants were reached. It was valuable for the company to establish with all these executives the trade name and a knowledge of the characteristics of the insulation, inasmuch as many of them might have influence upon purchases of this type of product.

In approaching the trade and manufacturers, the company selected probably the strongest buying motives that could be used for the product; namely, its dependability in quality, resulting from the special characteristics of the insulation, and the fact that it would increase the salability of appliances to which it was attached.

July, 1926 N. H. B.

Symbol Electric Company[1] (C)

MANUFACTURER—MOTORS AND WELDING EQUIPMENT

Advertising—*Trade Papers Utilized in Preference to General Magazines.* The company, a manufacturer of motors and electrical welding equipment, decided to discontinue advertising in general magazines of national circulation and instead to advertise in technical trade journals. Results of the advertising in general papers had not, in the company's opinion, been commensurate with the costs.

(1925)

The Symbol Electric Company, which was organized prior to 1900 to manufacture motors and electrical equipment, in 1916 started advertising its two principal lines, motors and electrical welding equipment, in general publications with national circulation. In 1924 the company decided that the results which it obtained from this advertising in general publications were not commensurate with the cost. It was proposed at that time that the company should transfer its advertising efforts to technical and industrial publications.

The company in 1913 had developed a line of electric arc weldings which were designed for use principally in the manufacture of iron and steel products. The welding process had been applied in the manufacture of the company's own electric motors. After 1913 the company had specialized in the manufacture of the welding equipment and of electric motors which were designed especially for the type of work encountered in driving elevators and machine tools operating under variable loads. The motors also had waterproof features which made them specially adapted for use with pumps and other machinery operating in damp or dirty places. Over 70% of the company's sales of motors were made to manufacturers of direct motor driven machinery and hoisting equipment who incorporated the motors as standard equipment on their machines. The market for the welding equipment was among manufacturers of iron and steel products for use in manufacturing and for repair work. There was a possibility that arc welding would revolutionize the entire manufacture of many lines of iron and steel products, since, by the

[1] Fictitious name. See also Symbol Electric Company (A), (B), and (D), pages 159, 241, and 516, respectively.

use of welding, these products could be made from pressed steel instead of from cast iron. Welding also could replace riveting in many places.

The company's problem in selling the welding equipment was one of educating manufacturers to change their process of manufacture. Welding in 1913 was thought of generally as of service only for repair work, yet the Symbol Electric Company was able to demonstrate that many products and machine parts made from pressed steel parts and standard steel shapes welded together were as strong as similar products made from cast iron. The welded items, moreover, were the less costly. The welding process had special possibilities in the automotive industry, where it could be applied in making axle housings and chassis frames.

It was necessary, however, to overcome prejudices against products manufactured by electric welding. Electric welding left a rough surface where the two parts to be joined were welded. Executives of the Symbol Electric Company discerned a trade inertia which made users of iron and steel products who were accustomed to cast-iron forms and riveted joints hesitate to accept welded products of pressed steel, which had a more angular and less finished appearance and which looked weaker than the heavier cast-iron products. Many engineers who designed automotive parts and other iron and steel structures, furthermore, were unacquainted with the problems involved in designing for the use of welding. Designing engineers had available elaborate tables and formulae to determine strength of materials, stress and strain, shearing, and other coefficients of physical properties of materials. These tables were built from laboratory tests and experiments and were available in engineering handbooks and in handbooks published by steel companies. In designing a boiler, for example, the engineer by formulae could determine the necessary thickness of boiler plate, the best diameter and material of rivets, and the best location of rivets for any given pressure. The physical properties of electrically welded joints under various conditions, however, had not been reduced to tables or formulae. Experimental work in steel laboratories and colleges was being encouraged by the Symbol Electric Company.

The Symbol Electric Company was one of the first to develop electric arc welding, and its welding equipment, in the executives' opinion, had special features which gave it a competitive lead over

any other electric welders. For many uses the electric arc welders had easily demonstrable advantages over combustion flame welding equipment.

The company distributed its products through its own branches in the eastern and middle-western sections of the United States and through machinery supply firms with exclusive territories in the South and West. Salesmen who were located at the branch offices sold both motors and welders. They were able to give technical advice and to demonstrate the use of the welding equipment. They were expected to maintain cordial relations with the customers who had purchased Symbol products and to obtain new customers. The company had technical experts whom it sent to assist its salesmen or agents in problems of new application of the welders in manufacturing processes.

The company had begun advertising in 1916 in general magazines of national circulation. The decision to advertise was not based on any definite plan of accomplishment. The officials believed that the sales problem was one of education, hence the company should advertise. The general magazines chosen, the *Saturday Evening Post* and the *Literary Digest,* had wide circulation and were thought to be read by a large number of business executives. Many companies which were prospective users of Symbol motors or Symbol arc welders advertised in these general publications, and three or four companies which manufactured motors or other electrical industrial equipment also advertised in them.

The Symbol Electric Company for eight years advertised continuously in these general magazines at a cost of $100,000 a year. The advertisements were full pages appearing once a month, usually in the last weekly issue of the month. About 70% of the advertisements were devoted to the Symbol motors. The other advertisements were of an educational nature illustrating uses of the electric welders. The advertising was placed through an advertising agency, which wrote the copy and prepared the advertisements. The company furnished technical data and checked the copy for inaccuracies.

The advertisements regarding the motors usually had a large heading at the top of the page—"Symbol Motors"—followed by pictures showing applications of the motors, with a brief descriptive text under the pictures. Frequently, comparative charts of

load curves were shown. About one-half the page was filled with text headed by some attention-getting headline such as "Fit the Power to the Work." The text usually emphasized special features of the motors, such as their construction, durability, resistance to dampness and dirt, and their special adaptability to certain variable load conditions. In one advertisement, for example, a picture showing a limousine drawing a plow was used to emphasize the fact that a motor of sufficient horse-power rating for a given load still might be entirely ill adapted to the work at hand. The advertisements stressed the fact that manufacturers of machinery were equipping their machines with Symbol motors because they knew the motors were designed and selected to meet the special requirements of the machinery. The text urged purchasers of machinery to insist on having the machinery equipped with Symbol motors and warned against buying separately machinery and motors to operate the machinery. A cut of a motor usually appeared in a lower corner and the sales branches of the company were listed at the bottom with a sentence stating that persons interested could secure further information by writing to the home office or to the nearest branch. No coupons appeared in the advertisements.

The company had no measure of the effectiveness of its advertising. Conditions from 1916 to 1920 were unsettled with the entry of the United States into the World War and the subsequent post-war inflation in business. Sales of welding equipment had increased gradually, until in 1919 they amounted to about $75,000; sales of motors at that time amounted to about $1,000,000. The company had expected that its past advertising would help bolster up sales during periods of business depression. In 1921, however, sales of both motors and welders had suffered severely. The company had continued its advertising, nevertheless, with the appropriation of $100,000 a year until the latter part of 1924. Motor sales had recovered in 1922 approximately to the 1920 figure and had increased about 15% a year in 1923 and 1924. Welder sales after 1921 had increased rapidly. The publicity which electric welding received in ship repair work during and after the war had assisted in its development, and several competing brands of welders had been developed. By 1924 the company's annual sales of welding equipment had reached $1,200,000.

The costs per full-page advertisement had increased from $5,000 in 1916 to $7,000 in 1924 for the *Saturday Evening Post* and from $850 in 1916 to $4,000 in 1924 for the *Literary Digest*. The company had received only a few inquiries which could be traced to the advertising. In the latter part of 1924 the sales manager of the Symbol Electric Company, who had control of advertising policies, decided to discontinue advertising in general magazines. He stated that this decision was based entirely on his "hunch" that the effectiveness of this form of advertising for his products did not justify the cost. He believed the advertising had failed to protect the sales of the company against business depressions, and that in the general magazines the company was paying advertising rates based on a large national circulation, the greater portion of which reached readers who had no interest in industrial products and who could not influence purchases of industrial electric motors or welding equipment. The sales manager knew of some companies manufacturing industrial products which had advertised in general publications in 1919 and 1920 in order to avoid high excess profits taxes. The advertisements of many manufacturers of industrial goods had dropped out of the general magazines after 1921.[2]

Early in 1925 representatives of technical periodicals for electrical and mechanical industries urged the Symbol Electric Company to advertise in technical papers. The representatives of one publishing house proposed an advertising program which appealed to the sales manager of the Symbol Electric Company and which he adopted. This program called for double-page spreads in four technical periodicals. One periodical was a weekly publication which circulated almost exclusively among electrical engineers and executives of power stations, manufacturers of electrical ap-

[2] A certain group of 114 companies, in 1919, were advertising in general mediums industrial goods that neither were sold to, nor were of direct interest to, the general public; and 33 others commenced such advertising in 1920. These companies used:

794	pages	of	advertising	in	1920
237	"	"	"	"	1921
152	"	"	"	"	1922
144	"	"	"	"	1923
122	"	"	"	"	1924

They used only 15% as much space in 1924 as was used in 1920, and only 20% of the companies that advertised in 1919 and 1920 used space in 1924.—Research study submitted to Professor of Advertising, Harvard Graduate School of Business Administration.

paratus, and industrial firms using electrical equipment. Two of the papers, one of which was published weekly and the other monthly, reached the machinery field and were read by mechanical executives, engineers, designers, production superintendents, and machinists. The other paper was a monthly industrial publication with a circulation reaching factory owners and executives such as heads of departments, general managers, and superintendents. Prices for full-page advertisements in these papers ranged from $150 to $280, the amount depending on the publication and the number of insertions during a year. The company's advertising budget amounted to $50,000 annually for the trade-paper advertising.

All the advertisements of the Symbol Electric Company in technical papers had the same general make-up. At the top was a cut of two persons, one urging continuance of an old process of manufacture and the other urging the adoption of new and better methods as illustrated by Symbol arc welders and Symbol motors. The text usually described and illustrated by simple pencil sketches the way to construct products out of pressed steel or structural steel shapes joined by electric arc welding and gave reasons why this way was easier and cheaper than construction from cast-iron or riveted shapes. Figures sometimes were given on comparative costs of the welding method and other methods of construction. Each advertisement carried a coupon which could be sent for further information and for booklets describing the Symbol motor and Symbol arc welder.

In addition to the $50,000 spent for advertising in technical papers in 1925, the Symbol Electric Company spent $10,000 in preparing and mailing circular letters to prospective customers. These letters gave descriptions and data on savings made possible by use of Symbol motors and welders. One industry was circularized at a time. The sales manager secured, for example, a list of the firms manufacturing iron pipe and sent letters addressed to the company names. These letters described the savings which would result if the welding process was used in making pipe. Three or four follow-up letters were used.

The sales manager of the Symbol Electric Company, in 1926, was of the opinion that the change in advertising from general magazines to technical industrial publications had proved wise. The company did not keep an analytical record of inquiries re-

ceived from the advertising, but it had received during 1925 a large number of inquiries and a majority of these inquiries were from persons actively interested in purchasing Symbol equipment. The inquiries were turned over to salesmen at the nearest branch offices. Sales of motors in 1925 had increased about 15% over sales in 1924 and sales of welding equipment had increased about 50% over those in 1924.

COMMENTARY: The issue raised in this case has been the cause of frequent discussion; namely, the advisability of advertising certain industrial products through mediums of general circulation rather than through industrial and technical periodicals. While this company had no definite measure of the effectiveness of its advertising through the two types of mediums, apparently it was satisfied that the approach through the industrial and technical press was more effective and more economical than the approach through general mediums. A general rule to apply in the selection of mediums is that of choosing those which reach with a minimum of waste in circulation the people whom the advertiser wishes to influence. It is to be noted that through the use of industrial and technical periodicals the Symbol Electric Company apparently was able to accomplish the following things:

1. It was able to reach a large proportion of the executives and engineers whom it desired to influence.

2. For a sum only half as large as that previously devoted to advertising in two general magazines it was able to use in each of four trade papers larger space than it had used in the general periodicals and to make more frequent insertion of copy.

3. Although there was no definite way of determining the effectiveness of the two types of mediums in the hands of interested persons, it would seem that the trade and technical press reached prospective purchasers at a time when they were interested in considering the type of message which the Symbol Electric Company wished to convey to them through its advertising.

In summary, although any statement concerning the effectiveness of mediums in a case of this kind must be largely a matter of opinion, it appears to the writer that the Symbol Electric Company, with its purely industrial products, was wise in deciding to advertise in industrial and technical papers instead of in general mediums.

July, 1926 N. H. B.

Arjax Company[1]

MANUFACTURER—ELECTRICAL PRODUCTS

ADVERTISING—*Manufacturers' Allowance for Printing of Wholesalers' Catalogs.* To insure listing of its products in the catalogs of its wholesale distributors, the company, a manufacturer of electrical goods, assumed a part of the printing cost for the distributors' catalogs. It was proposed that the company discontinue this allowance entirely or that it regulate the allowance to each wholesaler according to the wholesaler's sales of its products.

(1915)

The sales department of the Arjax Company, which manufactured electrical products, deemed it desirable to have as extensive as possible a list of the company's products in distributors' catalogs. For this reason, the company assisted in the preparation of material for the catalogs of wholesalers selling its products and also assumed a part of the printing cost for the catalogs of its 40 permanent wholesale customers. In 1915, because of increased costs for this work, the company contemplated discontinuing the payments which it customarily made toward the expense of printing wholesalers' catalogs.

The company had furnished electrotypes of Arjax products to any distributor desiring them for use in catalogs; the company refused to accept responsibility for statements made in its distributors' catalogs unless it was given an opportunity to inspect the copy. Usually, the wholesalers contracted for catalogs with printers, and the printers collected from the manufacturers whose products were listed additional compensation at stated rates per page. As a rule, the Arjax Company had no information as to the terms of the contracts between wholesalers and printers.

The catalog department of the Arjax Company had encouraged the wholesalers to employ some one of certain printers who for a number of years had specialized in catalogs for wholesalers of Arjax products. These printers were acquainted with the catalog material of the Arjax Company and carried a stock of the company's electrotypes, so that if the wholesalers employed them the company did not have to furnish cuts to numerous printers.

[1] Fictitious name.

The company also believed that from those printers the wholesalers secured better work. One of the largest of those printers was the Jameson Catalog Company.[2] In 1915 the Jameson Catalog Company informed the Arjax Company that the charge for each page on which its products were listed in wholesalers' catalogs was to be raised more than 50%.

When this notification of increased prices was received, the chief of publications of the Arjax Company recommended that the allowances granted for wholesalers' catalogs be discontinued. He argued that the wholesalers should bear the whole expense of their catalogs, since the catalogs were a legitimate part of their selling and advertising programs and the expense was provided for in the discounts granted by the Arjax Company. If a wholesaler's catalog was not profitable to him, obviously it was not profitable to the manufacturers. Moreover, as long as manufacturers were willing to pay for catalogs, wholesalers would continue to issue them even if they were not profitable. If the company continued to pay part of the printing expense for this group of 40 wholesalers, furthermore, other distributing firms desiring to list the Arjax Company's products would be convinced that discrimination was being shown, if the company refused to do more than furnish them with electrotypes. Finally, he was convinced that the wholesalers paid the printers enough to cover their costs and allow a fair profit, and that the fees which the printers demanded of manufacturers represented extra profit.

It was recognized, however, that withdrawal of the customary payments to the printers probably would lead the printers to pass the charges on to the wholesalers. The wholesalers might resent the discontinuance of the assistance which the company had extended for a long time, and, consequently, might not give Arjax products as complete representation as formerly.

The catalog manager suggested that, instead of granting each printer a certain amount for each page listing Arjax products, the company should regulate the allowance according to the sales made by the wholesaler. If a wholesaler's sales of Arjax products made it worth while, the company would grant the same amount for catalog listing as had been granted formerly. If the sales did not increase or were decreasing, the allowance would be reduced or even withdrawn.

[2] Fictitious name.

COMMENTARY: In selling through selected distributors, it was distinctly desirable for the Arjax Company to have its products listed in the catalogs of its distributors as a means of localizing demand; that is, of directing consumers to particular wholesalers from whom they might secure Arjax products. The case is analogous in many respects to that of the manufacturer of consumers' goods who is using exclusive agents or selected dealers. A complete advertising program on his part must include some means of directing the consumers within any locality to the store where the manufacturer's brand can be secured. In the consumers' goods field it has been found that such a manufacturer cannot leave local advertising entirely to the dealer but must exercise some control over it and in some instances must give liberal support to such local advertising in order to insure that it is properly done. Likewise, in this case, the Arjax Company should have sought to have a proper listing of its products in distributors' catalogs and should have exercised as much control as possible to see that they were properly presented. It goes without saying, however, that the Arjax Company in giving support to wholesalers' catalogs should have had a proper business relationship directly with the distributors rather than to deal with the printers, who, in turn, sought additional compensation from the distributors.

February, 1928 N. H. B.

Titon Leather Company[1]

MANUFACTURER—LEATHER BELTING

ADVERTISING—*Discontinuance of Contributions to Customers' Advertising.* To hold the patronage of distributors and users of its products, the company, a manufacturer of leather belting and other leather products, for many years, upon request, had inserted advertisements in customers' house organs and had made various types of advertising contributions. Because of the waste which this plan involved, the company decided to refuse all requests for donations for advertising which did not fit in with its premeditated advertising plan.

(1924)

The Titon Leather Company manufactured leather belting and other leather products for use in manufacturing plants. It advertised extensively in general magazines and trade papers covering the markets for its products. It also conducted direct-by-mail advertising. For many years, the company, at the request of customers, had made various types of advertising contributions and had inserted advertisements in dealers' house organs and in other mediums. The advertising manager of the Titon Leather Company looked upon such advertising expense as waste, but the company had granted all such requests as a means of holding the goodwill of its customers. In 1924, however, the company adopted the policy of refusing all requests for donations for advertising which were not a part of its premeditated advertising plan.

The principal markets for the products of the Titon Leather Company in order of importance were in the following industries: metal working, textile, lumber and woodworking, paper, flour milling, sugar refining, and cement making. The company sold approximately 70% of its products directly to industrial users through its sales force and its 16 branch offices, located in the principal industrial centers of the United States. The remainder of its sales it made through about 85 selected dealers or supply firms. The company had annual sales of between $6,000,000 and $10,000,000.

Prior to 1921 the company had spent about $200,000 annually

[1] Fictitious name.

in advertising. About 75% of this expenditure had been for display advertising in general magazines of national circulation, in trade papers covering the principal industries to which the company sold its products, and in a few newspapers to assist dealers in special sales campaigns. About 10% of the advertising appropriation had been spent for direct-mail advertising. The remaining 15% had covered salaries, supplies, exhibits at fairs, and the contributions and advertising which had been solicited by users and dealers.

The advertising expenditures which the company decided to discontinue consisted of a variety of contributions and small expenses of which the following examples are typical. A railroad, which purchased about $10,000 worth of the company's products annually, planned an outing for its employees. When the entertainment committee visited a printer to make arrangements for the printing of a program, the printer suggested a fine leather-covered program which would cost more than the railroad company cared to spend for this purpose. The printer suggested that the cost of the program could be met by securing advertisements from companies which sold supplies to the railroad. The railroad, accordingly, requested the Titon Leather Company to purchase advertising space in the program at a cost of $150. The request for this advertising was accompanied by an intimation that the railroad would transfer its patronage to competing companies if the request were not complied with.

In addition, the Titon Leather Company received frequent requests that it purchase advertising space in house organs which customers and distributors published and circulated among employees and salesmen and sometimes among their customers. Dealers sometimes were encouraged by newspapers to advertise in full-page spreads and to meet the expense of that advertising by requesting all the manufacturers whom the dealers represented to contribute a part of the expense, in return for which the manufacturers' names would be shown in connection with the dealers' names. The salesmen of the Titon Leather Company frequently were requested by their regular customers to purchase tickets to employees' outings or benefits or to contribute toward the awarding of prizes in employees' athletic events. Although these various requests individually were small, in the aggregate they amounted to approximately $10,000 annually.

The company had no established procedure for dealing with these requests or for allocating the expenses. Sometimes the requests were directed to the president or other executives of the company. Salesmen frequently included these expenses as part of the traveling expenses, so that they became a charge to the general sales expenses rather than to advertising expense.

The business depression which occurred in 1921 and 1922 seriously reduced the sales and earnings of the Titon Leather Company. The advertising budget for 1922 was cut to $13,000 and in 1923 was increased to $33,000. In these two years the advertising expenses were budgeted carefully and, although the waste advertising continued, it was absorbed in general sales expense instead of being charged to advertising expense. By 1924 business conditions had improved and the advertising manager planned an expenditure for that year of $78,000, of which 50% was to be spent for display advertising, 35% for direct mail advertising, and 15% for general advertising expenses. The strict economizing by the company during 1921, 1922, and 1923, and the reduced advertising appropriations for what the company considered legitimate advertising, had brought forcibly to the attention of the executives the desirability of eliminating the waste advertising expenses.

The company decided in 1924 to establish a definite policy of not granting requests for contributions or for advertising which were not deemed justifiable. The policy provided that all requests for such donations should be sent to the advertising manager. The advertising manager started in 1924 to reduce gradually the wasteful expenditure. When requests came in, a letter was sent in answer stating the company's policy and explaining the reasons why such advertising would increase the cost of the products and would work to the disadvantage of both parties. When a distributor requested assistance in newspaper advertising or the issuing of a house organ, it was explained that the expense of such advertising was not so effective in increasing sales of the distributor as the same amount spent in trade-paper and direct-mail advertising. As an alternative, an offer was made in some cases to spend a greater sum than the amount requested in direct-mail circularizing in the dealer's territory if the dealer would provide a list of customers and prospects. If the dealers were interested in this alternative the direct-mail work was done. The

offering of the alternative helped replace waste advertising with legitimate advertising.

By 1926 the company had succeeded in reducing the undesirable expenditures to about $500. In refusing new requests, it became company practice to cite the policy of the company and to enclose copies of other requests for equally desirable causes which had been refused. When the policy of refusing such requests was first adopted, many of the company's customers had been insistent and had become angered at the refusal, but in no instance had a customer failed to continue his patronage of the Titon Leather Company. It was found that by using reasonable arguments and facts, the company was able in most instances to refuse requests without offending customers and distributors.

COMMENTARY: This case raises a problem in avoidance of an undesirable form of reciprocity that is met by many manufacturers. Acquiescence in the requests of customers for small advertising contributions for such purposes as are outlined in the case is much easier than refusal; yet small contributions of this type quickly mount to a considerable expenditure. In accordance with the belief of the Titon Leather Company officials, such advertising is undoubtedly wasteful. Not only are the mediums used frequently of small advertising value, but their use ordinarily fails to fit in with a well-planned campaign of advertising.

The significance of the case rests in its illustration of a means of discontinuing such wasteful expenditure without apparent loss of goodwill or patronage. The adoption of a fixed policy, a centralization of control for handling requests, and the exercise of a reasonable attitude in refusing such solicitations are to be commended.

January, 1927 N. H. B.

Gurnet Corporation[1]

MANUFACTURER—COPPER AND BRASS

Pricing—*Varying Price Policy to Hold Customer Patronage.* When it increased its prices, the company, a manufacturer of copper and brass sheets, bars, and tubes, permitted its wholesale distributors to place orders at the old prices for quantities equal to not more than two months' normal purchase. At the time of a price increase in 1922, one of the distributors ordered, at the old price, a quantity far in excess of that to which it was entitled under the company's plan. It was necessary for the company to decide whether to make an exception to its usual practice for this customer.

(1922)

The Gurnet Corporation, a manufacturer of copper and brass sheets, bars, and tubes, was represented in the large buying centers by wholesalers who bought outright from the corporation and carried stocks of its products. It was a well established policy of the corporation to protect wholesalers against price increases by giving them advance notice of such increases and permitting each wholesaler to place orders at the old prices for quantities equal to not more than two months' normal purchases. The corporation also protected customers against declining prices by crediting each of them, when a price reduction was made, with an amount equal to the price reduction on the customer's average monthly purchases during the preceding three years. The corporation had experienced no difficulty in carrying out its policy on price advances.

In August, 1922, inasmuch as prices had been slightly below production cost, the corporation announced an advance of 2½ cents a pound. The Hamlin Brass Company,[1] the corporation's distributor in Cleveland, thereupon placed an order for 200,000 pounds of sheets and tubes at the old prices; that distributor's average monthly purchases from the corporation during the preceding three years had been approximately 40,000 pounds. It was necessary for the Gurnet Corporation to decide whether or not to accept this order.

The Hamlin Brass Company handled no lines that competed with the Gurnet line; relations between the two firms always had

[1] Fictitious name.

been satisfactory. It was the opinion of executives of the Gurnet Corporation that other manufacturers had been seeking to secure orders for brass and copper sheets and tubes from the Hamlin Brass Company and that that company's large order was placed in an attempt to take advantage of the severe competition among fabricators for the limited amount of business available. The only other wholesaler in Cleveland with an organization capable of handling the Gurnet products already carried the line of a strong competitor.

The Gurnet Corporation had sufficient stock on hand to fill the 200,000-pound order. If it filled that order, however, it would not be able to fill all the other orders that would be placed in anticipation of the price rise. The corporation was reluctant to manufacture additional sheets and tubes at a loss. Nevertheless, the loss of a customer such as the Hamlin Brass Company would be unwelcome.

COMMENTARY: The question in this case was chiefly ethical. The Gurnet Corporation had established policies for protecting customers when it reduced prices and when it increased prices. These policies were well known and applied to all customers. The Hamlin Brass Company sought to take an unfair advantage of its position as the company's sole distributor in an important market by demanding preferential treatment. If the Gurnet Corporation had acceded to that demand, it would have been unjust to its other customers. Hence it should have decided to refuse the demand.

October, 1927 M. T. C.

Atlan Alcohol Company[1]

MANUFACTURER—ANTI-FREEZE ALCOHOL

Pricing—*Price Concession to Secure Patronage.* The company, a manufacturer of alcohols, including an anti-freeze mixture, sought the patronage of a firm that sold automobile accessories and that also operated a chain of 50 filling stations. Because of its large requirements, that firm requested a price lower than the published prices to which manufacturers of alcohol customarily adhered. The company decided to make the distributor its agent and to grant the distributor, as an agent, a 2% discount.

(1927)

The Atlan Alcohol Company manufactured and sold denatured alcohol, ethyl alcohol, wood alcohol, an anti-freeze mixture, and other similar products. Its annual sales volume was about $3,500,000. Most of its sales were in carload lots; it did not seek, but would accept, smaller orders. Tank cars held 6,000 to 10,000 gallons and a car of drums carried about 4,000 gallons.

The company had 500 customers. Sixty per cent of its sales were made on contract. All sales were made directly to users except in the case of anti-freeze, which was sold to dealers. Sales of anti-freeze were about 15% of the total sales volume.

The company employed three salesmen, one for the state of New York, one for New Jersey, and one for Pennsylvania. All of the salesmen, and also the sales manager, sold in New York City. The salesmen called upon some customers only once or twice a year; others they visited every two or three weeks. For the New England territory, the company had a representative in Boston, who received a commission of 5%. The representative carried small stocks; he did his own billing and collecting and bore the credit risk.

The company's plant, located in New Jersey, was closer to the New York City market than were competitors' plants. Its location put the company in a favorable competitive position because in that market promptness in delivery was important; customers in metropolitan districts generally carried only small inventories because of the fire hazard. The company obtained good shipping rates because its plant had sidings on four railroads.

[1] Fictitious name.

The company competed for business everywhere in New England and in other places to which the freight rate from the plant did not exceed one and one-half cents or two cents a gallon. If the company had extended its territory beyond that radius, it would have met the competition of companies which could sell at lower delivery prices.

In the summer of 1927 the Atlan Alcohol Company sought the patronage of the Ranton Company. The Ranton Company was a dealer in automobile accessories, and, in addition, operated a chain of 50 filling stations in and about the city in which it was located. Its annual requirements of anti-freeze alcohol usually were about 35,000 gallons. Because of these large requirements, Mr. Ranton, president of the company, felt that the company should obtain a price lower than the published price. Alcohol prices were standard and were published daily in financial papers. Producers in general adhered to the published prices, in order to avoid disastrous price cutting.

Anti-freeze alcohol was quoted at 50 cents a gallon in car lots shipped in drums and 48 cents a gallon in tank car lots, f.o.b. shipping point. Mr. Ranton stated that he would purchase from a competitor from whose plant freight charges were slightly lower if he were unable to get a lower price from the Atlan Alcohol Company.

Because the Ranton Company's purchases were large and because Mr. Ranton stated that he could obtain new customers for the Atlan Alcohol Company, the company granted him an agency, with a discount of 2%. Besides his own orders for 35,000 gallons, Mr. Ranton obtained other orders for two drum carloads of anti-freeze alcohol in the fall of 1927. The Atlan Alcohol Company did the billing and collecting on these orders.

COMMENTARY: This is a most commonplace business transaction. The real purpose of granting the discount of 2% to the Ranton Company, of course, was to obtain Mr. Ranton's order. It was not expected that he would become a bona fide agent on a substantial scale, for he already had other interests which must have demanded practically all his attention. The effect, therefore was to give preferential treatment to a large purchaser who was a good bargainer. The departure from a one-price policy was not commendable.

December, 1927 M. T. C.

Coffeyville Textile Machinery Company[1]

MANUFACTURER—TEXTILE MACHINERY

Pricing—*Price Reduction to Stimulate Sales.* In January, 1922, the textile machines made by the company were priced at cost, yet, because of the depression in the textile industry, almost no demand existed for such machines. It was proposed that the company should make a further price decrease in order to stimulate sales and thus permit a wider distribution of overhead.

(1922)

Although costs had not been reduced appreciably, it was proposed in January, 1922, that the Coffeyville Textile Machinery Company should reduce its prices in order to stimulate sales.

When the depression began in the summer of 1920, the company had orders on hand for more than two years' production, but cancellations reduced the orders by about one-half. Mill companies which had buildings partially or wholly completed proceeded with the installation of machinery in order to minimize the loss on their investment. When installations on these orders were completed, the Coffeyville Textile Machinery Company found that because of the general depression in the textile industry practically no demand existed for machinery, except for repair jobs and occasional small lots. The high cost of building and equipping new mills prevented expansion of the industry. Mills previously constructed had been written down in some instances to $10 per spindle, whereas a mill constructed at current prices would have cost $50 to $70 per spindle.

The estimated cost per spindle of a four-story spinning mill and a one-story weave shed with basement and saw-tooth roof for producing print cloths was as follows:

1910	$28.28	1916	$30.27
1911	27.67	1917	37.63
1912	27.75	1918	45.29
1913	27.53	1919	55.48
1914	26.23	1920	73.05
1915	27.28	1921	69.36
		1922	53.82

The estimated cost, as of January 1, 1911, and January 1,

[1] Fictitious name.

1922, of erecting and equipping complete a spinning mill of 50,000 spindles making No. 16 carded yarns for hosiery trade, finished on cones and skeins, was as follows:

Spinning Mill	1911	1922
Mill buildings (including warehouse)	$ 252,800	$ 498,000
Fire protection	15,400	30,700
Lighting	8,400	15,800
Heating and humidifying	17,600	29,000
Shafting	7,100	9,000
Motors and power wiring	56,000	88,800
Belting	8,800	15,000
Supplies and miscellaneous equipment	40,100	80,000
Power plant complete	198,300	315,000
Textile machinery and erection	496,400	1,069,200
Freight	15,800	19,400
Engineering and contingencies	111,800	217,000
Total	$1,228,500	$2,386,900

Above buildings of slow-burning construction, three stories for spinning, one story for picking, and four stories for storehouse for a six months' supply.

Sprinkler and hydrants for fire protection, electric lights, steam coils for heating, individual heads for humidifiers.

Power houses with steam turbines.

Drives were individual motors on pickers, two and four frame for roving and spinning, and group drive for balance of machinery.

The estimated cost as of January 1, 1911, and January 1, 1922, of erecting and equipping a weaving shed containing 1,280 automatic looms to weave print cloths 38½ inches wide, 5.35 yard, 64 x 60 threads per inch and of carded No. 28.5 warp and No. 39 filling was as follows:

Weave Shed	1911	1922
Manufacturing buildings, including plumbing	$180,500	$360,900
Fire protection, including tank, hose, houses, hydrants, and sprinklers	10,400	19,300
Lighting, including transformers and wiring	4,100	7,800
Heating and humidifying	18,500	30,700
Shafting	11,400	14,500
Motors and power wiring	16,700	25,400
Belting	5,600	9,900
Supplies	5,000	10,000
Power plant complete	110,000	168,700
Textile machinery	243,700	416,900
Freight	5,000	9,700
Engineering, contingencies	61,100	116,000
Total	$672,000	$1,189,800

Buildings of slow-burning construction. Shed one story with basement and saw-tooth roof. Sprinkler and hydrants for fire protection, electric lights, steam coils for heating, individual heads for humidity. Power house with steam turbine. Group drive with shafting in basement.

Figured that yarns would be received on beams and cones or tubes.

Goods woven on automatic looms.
Same equipment figured for both 1911 and 1922, but with prices changed according to years—*Year-Book* of the National Association of Cotton Manufacturers with *Cotton Manufacturers' Manual*, 1922, pages 195, 196, 198.

The prices of the Coffeyville Textile Machinery Company for typical machines were approximately as follows:

Date (January 1)	Finisher Picker	Card	Comber	Drawing Frame per Delivery	Roving Frame per Delivery	Spinning Frame per Spindle	Plain Loom
1910	$ 750	$ 600	$1,250	$ 60	$ 6.50	$ 2.60	$ 83.00
1911	700	550	1,250	60	5.60	2.50	83.00
1912	750	600	1,250	55	5.75	2.50	83.00
1913	700	550	1,200	55	5.50	2.50	83.00
1914	675	500	1,150	55	5.00	2.00	83.00
1915	700	525	1,300	60	5.50	2.20	83.00
1916	750	650	1,300	60	6.75	2.65	85.00
1917	1,000	850	1,400	75	8.50	3.90	101.00
1918	1,280	975	1,800	90	10.00	4.50	152.00
1919	1,600	1,200	2,000	115	13.00	5.50	164.50
1920	1,760	1,325	2,400	125	14.50	6.00	213.50
1921	1,920	1,600	2,500	160	18.00	7.00	213.50
1922	1,600	1,325	2,250	125	14.50	6.00	147.00

Although the prices of raw materials had fallen by January, 1922, the cost of manufacturing textile machinery per unit had shown little decline from the peak. Prices of machines had been reduced to a cost basis. Though an increase in orders would permit wider distribution of overhead, it was doubted whether any practical reduction in prices below cost would increase sales.

The company had a large plant and employed skilled workmen. Its products were manufactured to order; because of the uncertainty of specifications on future orders, it was not practical to manufacture large numbers of machines for stock.

COMMENTARY: This problem arose during the period of depression which followed a severe business crisis. The chief question, under these circumstances, was whether the company could have stimulated sales by reducing prices below cost.

The sale of installations is governed by the demand for the products which the machinery turns out; the demand for the machinery, in other words, is a derived demand. In January, 1922, the textile market was depressed and stocks of yarn and cloth had been accumulating in excess of the demand. There was uncertainty also as to whether the manufacturing capacity in the textile industry had been expanded beyond normal market requirements. Under these circumstances the

textile manufacturers, who constituted the market for the Coffeyville Textile Machinery Company, were seeking to liquidate surplus inventories of goods and to find means of securing orders which would enable them to operate their existing plants more nearly to full capacity. The conditions were not favorable to the construction of new mills or to the expansion of existing plants.

A reduction in prices by the Coffeyville Textile Machinery Company below the cost figures, therefore, could not logically have been expected to stimulate sales appreciably. The company was receiving some orders for necessary replacements. If prices had been further reduced, the volume of sales would not have been influenced materially and the chief effect would have been to cause a loss to the company on the orders which it did receive.

October, 1927 **M. T. C.**

Symbol Electric Company[1] (D)

MANUFACTURER—MOTORS AND WELDING EQUIPMENT

Pricing—*Adoption of One-Price Policy.* Price competition in the sale of motors to firms buying them as factory equipment was keen, and the company, which manufactured motors and also electrical welding equipment, commonly made price concessions to such customers in an effort to secure their orders. This practice had an undesirable effect on the company's salesmen and was objected to by the company's other customers for motors. The company decided, therefore, to adopt a one-price policy.

(1923)

The Symbol Electric Company manufactured electric motors and electric welders. It distributed its products through its branch offices in the eastern and central part of the United States and through supply firms with exclusive territories in the western and southern sections. The company always had followed a one-price policy for electric welders but frequently had made price concessions on motors in order to meet competitive prices. The company decided in 1923 to adopt a one-price policy for its motors also and to refuse to offer price concessions.

The Symbol Electric Company had been manufacturing motors since before 1900 and was one of the first companies to develop and market electric welders. The welders, which were placed on the market in 1913, were sold to manufacturers of iron and steel products for use as equipment in the process of manufacturing and for their repair shops. Between 70% and 75% of the company's sales of motors were made to about 50 manufacturers of direct motor driven machinery for resale with that machinery. The remainder of the motor sales were made to users such as mills and factories and to machinery dealers, mill supply firms, and electrical repair shops. Although about five manufacturers had developed welders to compete with the Symbol welder, the Symbol Electric Company had been able practically to double its sales of welders each year after 1921 at fixed prices which were equal to, or higher than, competitors' prices. The company's salesmen were able to demonstrate that Symbol welders had special features which gave them an advantage over competing

[1] Fictitious name. See also Symbol Electric Company (A), (B), and (C), pages 159, 241, and 494, respectively.

welders. Symbol welders ranged in price from $600 to $30,000; the welder most in demand sold at $1,000 f.o.b. factory. List prices of Symbol motors ranged from $50 to $200; sales were most frequent in the $200 size. Sales of welding equipment in 1923 were over $800,000 and sales of motors were over $1,000,000.

Terms of sale by the Symbol Electric Company allowed discounts to the company's exclusive distributors of 20% and 10%. The company also paid the distributors a sliding-scale bonus based on their annual volume of sales. In the branch territories the company made a small volume of sales, chiefly of motors, to supply firms and dealers without exclusive territories. Those distributors, who frequently represented several lines of motors, received discounts off list prices of 20% and 5%, and were paid the same rate of bonus as the exclusive distributors. Manufacturers who purchased Symbol motors for resale as standard equipment with their products received discounts of 20% and 5%. The usual discount which the company wished to offer to users was 15% off list prices, but the company frequently had allowed a larger discount in order to make sales.

The motors sold to manufacturers as standard equipment were sold not on a price basis but on the basis of their special qualifications for meeting the manufacturers' requirements. Symbol motors were especially adapted for use in operating machines of variable load, such as hoisting machinery, elevators, and heavy machine tools. The motors also had waterproof features which made them especially desirable for use in creameries, mines, and on pumping machinery. In its advertising the company emphasized the special features of its motors. It urged manufacturers of machinery to equip their machines with Symbol motors, which were especially well fitted to meet the working requirements of such machinery. The manufacturers buying motors as equipment for their products rarely requested price concessions and were interested more in the special advantages of Symbol motors than in competitive prices.

Price competition was keen, however, in motors which were sold to manufacturers as factory equipment. Ordinarily, when a new factory was built or when changes in the power distribution and application system of a factory were contemplated, the representatives of several motor manufacturers solicited the

order for motors. Frequently, on an order for over 10 motors the prospective purchaser notified the various motor manufacturers of the sizes of motors desired and the purposes for which they were to be used and requested bids. Sometimes the salesmen or representatives of as many as 30 motor manufacturers competed for an order. Juggling of prices usually resulted, since the prospective customer after receiving bids or estimates usually gave competing motor companies an opportunity to meet the lowest price bid or to go lower. Several large manufacturers of motors were said to be notorious for their price cutting on large orders. The Symbol Electric Company, prior to 1923, did not have a definite discount policy on sales of motors as factory equipment. Salesmen of the company constantly were requesting the company to sanction price concessions in order to meet competition, and the company frequently had entered the competitive bidding until the margin of profit on such sales practically was eliminated.

Officials of the company were of the opinion that sales made through price concessions lowered the morale of the sales force. The salesmen instead of using real salesmanship in selling the products on the basis of their special features and merits were forming the habit of relying on the home office for price concessions to sell the motors. Salesmen, furthermore, were wasting time in competing on a price basis for orders on which the company could not meet the final low price of large competitors. The company preferred its salesmen to devote greater effort to developing new customers among manufacturers who used motors as fabricating parts with their machinery, to whom sales could be made on a profitable basis without price haggling. The salesmen were inclined to stress sales volume and immediate sales rather than profits and future sales. The fact that the salesmen, in addition to their salaries, received bonuses based on their respective sales and on the relationship of sales expense to sales volume contributed to this result.

Mill supply firms and other distributors which purchased Symbol motors for resale objected to the price concessions made to users by the Symbol Electric Company; the company frequently sold motors to users at prices as low as those given the distributors. In a few instances, moreover, manufacturers buying the motors for resale with their equipment had learned of sales made

to users below the price quotations which they received. Although the resale manufacturers purchased principally on a quality rather than on a price basis, they objected to the Symbol Electric Company selling the same motors at lower prices to customers whose orders totaled less than their own annual requirements.

Officials of the Symbol Electric Company estimated that the orders which were secured purely on a price basis represented about 10% of the total motor sales of the company. If the company adopted a one-price policy with no quantity discounts or price concessions, it might lose that 10% of its business.

The company, however, adopted a one-price policy in 1923. A standard discount of 15% from the list prices was given all customers except resale manufacturers, who received 20% and 5%; supply firms and other distributors without exclusive territories, who received 20% and 5% and a bonus based on sales volume; and the exclusive distributors, who received 20% and 10% and the bonus on sales volume. Exclusive distributors were expected to resell to users on the same terms which the company gave such customers but they were not strictly held to this. A statement of the company's one-price policy as it appeared in advertisements and bulletins follows:

ONE FIXED PRICE—FAIR TO ALL

The price of Symbol Motors is fixed.

Every user can buy them at the same established schedule of prices.

The agent who sells Symbol Motors can always depend upon the same margin of profit to reward him for his work.

There are no special deals for the "tough buyer" or "close competition." There is no need to charge the small buyer a big price to make up for losses on "big deals."

There are no special processes held in reserve by which the insulation or other details can be made better at an additional cost.

Every Symbol Motor is as good as it can be made and is sold at the same price.

The company was successful in maintaining its one-price policy. Although it lost a large portion of that 10% of its business which it ordinarily had obtained on a price competitive basis, its sales in 1924 were about 15% above those in 1923 and in 1925 they were 15% above those in 1924. Fifteen per cent was about the average annual increase of prior years.

COMMENTARY: The motors sold by the Symbol Electric Company had special characteristics, such as their adaptability for use in operating machines working under variable load and their waterproof features, which could be used in appealing to the buying motives of many purchasers of motors. Accordingly, the company was following a sound policy in promoting the sales of its motors on buying motives other than price, although competition undoubtedly made the company keep its prices in line with those of competitors.

The portion of the market for motors which was most subject to price jockeying gave the company 10% of its total volume of motor sales. Adoption of a one-price policy would jeopardize this part of the business. In spite of this, the company acted soundly in adopting a one-price policy, primarily because it was thereby enabled better to promote the sale of its motors on buying motives stronger for the greater part of its business than the economy in purchase motive. The practice of shifting prices tends to center attention on price, whereas a fixed price policy tends to focus emphasis on buying motives other than price. This was to be noted in the effect of the company's variable price policy upon the salesmen. Under a variable price policy the salesmen sought price concessions from the company as an easier way to effect sales than to lay emphasis on the special qualities of the motors.

Another important consideration in this case was the effect of the variable price policy upon the chief channels of distribution of the company. Its largest market was among manufacturers who bought the motors as fabricating parts for inclusion in machinery which they sold. The second largest market was to mill supply firms and electrical dealers who purchased the motors for resale. The varying of prices in the sale of motors as equipment tended to break down the patronage motives among the purchasers for resale, who were the more important and more remunerative customers of the company.

The variation in discounts to manufacturers and to different classes of electrical dealers was not a deviation from a one-price policy. These were trade discounts made openly to certain classes of trade and maintained to all members who fell within the particular classes. In setting up the trade discounts the company was protecting its channels of distribution.

The relatively small market for equipment in factories was not especially remunerative to the company, inasmuch as the company had to lower its prices unduly to meet competition. Although the company lost considerable equipment business from its change to a one-price policy, there was reason to believe that adherence to such a practice and constant promotion of the motors by the salesmen and the company's advertising on the basis of motives other than price probably would tend, in time, to restore to the company the type of business

which had been lost, especially for those uses for which Symbol motors were well adapted.

The case illustrates well the advantages of maintenance of a one-price policy by a company whose products have features which make possible sales promotion on buying motives other than that of economy in purchase.

July, 1926 N. H. B.

Radio Instrument Company[1]

MANUFACTURER—WEIGHTMETERS

Pricing—*Lease* vs. *Sale—Varying Rates for Different Users.* The company, which manufactured a recently patented electrical device, called a weightmeter, for measuring variations in weight or moisture content of moving sheets of material during the process of manufacture, had to decide upon a method of pricing the device. The company considered the following methods: selling the weightmeters outright to users; leasing them at a fixed rental; selling them on a royalty basis with a uniform initial charge and a varying royalty charge per unit of product manufactured; making a uniform initial charge plus an annual charge based on the savings resulting from the use of the machines. The company decided to make an initial charge large enough to cover the costs of manufacture and installation and in addition to charge a fixed annual rental, varying between industries in accordance with the value of the weightmeter in the industries.

(1927)

The Radio Instrument Company was organized in 1925 to manufacture and market a recently patented device, known as a "weightmeter." The weightmeter was an electrical instrument so designed as to indicate the variations in weight or moisture content of moving sheets of materials during the process of manufacture. Some materials that could be so measured were sheet rubber, tire fabric coated with rubber, shoe lining, paper, celluloid, roofing, and sheet metals. Weighing of sheet material in the process of manufacture ordinarily was done by mechanical methods, but such mechanical measurements frequently were crude and inexact.

As research and experimentation with the weightmeter progressed, it became evident that the device could effect a considerable saving in manufacture and could help in standardizing the quality of products in the rubber, paper, textile, and other industries. The value of the weightmeter to users would vary widely according to use. This fact complicated the company's problem of pricing and marketing its product.

In its operation, the weightmeter depended upon the working principles of a radio receiving set. The inventor had noted when operating a radio set that a sheet of paper or other material

[1] Fictitious name

placed between the condenser plates caused a change in the tuning of the set, and furthermore, that the variation in the tuning increased as the quantity of the material inserted was increased. Realizing that this phenomenon might be utilized in industry as a means of checking weights of materials, he developed a machine whereby a sheet of moving material whose weight was to be checked could be passed between the condenser plates of a radio hook-up. The machine did not record the weight of the material in pounds or other units as it passed between the plates of the condenser but showed variations from a standard for which the machine was set at the time. In other words, the machine worked upon the principle of matching standard samples.

A needle, called the indicator, which could move from left to right over a calibrated scale, was connected to an electrical circuit containing the condenser plates between which the moving sheet of material passed. The indicator corresponded to the loud speaker in a radio receiving set. The standard sample placed between the condenser plates determined the natural radio frequency of the circuit, and thus its degree of response to an impressed radio frequency. A dial connected with a compensating condenser in the same circuit could be tuned so that the indicator pointed to zero, on the calibrated scale. When the indicator pointed to zero, the reading of the dial furnished a permanent record for the setting of the machine to the control point for material in process which was to match the sample. A variation in weight of the material passing between the condenser plates thereafter would cause the indicator to vary to the right or left from the zero mark on the calibrated scale. The amount of variation as shown on the scale would permit determination of the variation in weight from the standard sample.

To describe the operation of the machine, its use in a rubber factory is given. The weightmeter was attached to a rubber calender so that the sheet of rubber stock passing through the calender moved between the condenser plates of the weightmeter, which was set according to the sample of material to be matched.[2]

[2] A typical rubber calender consisted of a large frame which supported three hollow, steam-heated rollers placed in a vertical plane one above the other. Between the rollers a strip of fabric was run and into this fabric, as it passed between the rollers, rubber compound was pressed. The rollers could be adjusted so as to increase or decrease the distance between them, and this distance determined the thickness of the finished product.

The operator could adjust the calender rolls when the indicator showed that the weight of the material was running either above or below the standard. The indicator responded to very slight variations in the weight of the substances. For example, by the use of the weightmeter, inner tube stock for automobile tires could be kept at less than 1% of variation from the desired weight, and tire fabric could be kept at about 1%.

The device first had been experimented with in a paper mill as a means of checking the weight of a moving sheet of paper in the process of manufacture. By the end of 1926, it had been found that the device could be used, not only in controlling the weight of the paper, but also in controlling the moisture content of the paper as it came from the calender. A paper machine, therefore, could use two weightmeters: one to detect changes in weight, and one to detect changes in moisture content. It was important that the moisture content of paper be kept as nearly constant as possible. This was true, in the first place, because paper manufacturing companies sold paper by weight, and, in the second place, because variation from the desired moisture content, especially in newsprint, caused difficulty, waste, and annoyance when the paper was run through printing presses. Newsprint that was too dry, for instance, had a tendency to become charged with static electricity, which prevented smooth running through printing presses. A paper mill which could furnish newsprint with a standard moisture content had a valuable selling point. The existing methods of controlling moisture content of paper were crude and subject to error. The weightmeter, however, indicated slight variations in the moisture content. An operator, by changing the steam in the drying rolls in accordance with the readings of the weightmeter, could hold the moisture content of the paper to a desired standard.

As the experimentation progressed, it became clear that eventually there would be developed automatic control devices to be used in connection with the weightmeter to control the weight and quality of goods in process. When the weightmeter was used with only an indicator, an operator had to watch the indicator for variations in weight of material in process and then to adjust the processing machines to correct the errors. It was anticipated that attachments would be perfected by which the proper adjustments could be made automatically, without the assistance of operators.

Considerable work already had been done in the development of an automatic control attachment for calenders used in rubber manufacture; moreover, automatic devices had been developed and tested at an affiliated mill for use on paper machines to control the weight of paper run. It was expected that an automatic control attachment for the steam drying apparatus on a paper machine also would be developed. By the end of 1926, the company had developed a recorder which, when attached to the weightmeter, plotted a graph of the variations in weight of material.

The Radio Instrument Company planned to choose a representative firm in each of eight industries in which the weightmeter might be used to cooperate in experimenting with the instrument under actual operating conditions. Thereby the company hoped to determine the savings which the instruments would effect in the manufacture of different products in each industry. By the beginning of 1927, such experiments had been conducted in the plants of a rubber and a paper company.

The research engineers of the Radio Instrument Company stated that the probable savings from use of the weightmeters were both tangible and intangible. The savings which could be measured partially by experiments and on the basis of cost accounting records were, first, those resulting from reduction in amount of raw material used, since with accurate measuring overweight of articles would be eliminated, and, second, those resulting from increased production per machine-hour and per man-hour. Intangible savings would result from increased customer confidence and goodwill and from expected changes in process allowing reductions in the number of operatives.

Through the cooperation of the rubber company, the Radio Instrument Company experimented with its machine in the various processes of manufacturing rubber tires and other rubber products, such as boots and shoes. As a result of this experimentation the research engineers of the Radio Instrument Company estimated that the use of the weightmeter in tire manufacture would result in savings varying from $100,000 a year for an unusually large calender to $10,000 a year for each of certain small calenders often used in rubber factories. On a relatively few calenders in rubber factories the engineers estimated that a saving of $30,000 a year per calender might be brought about.

The use of the weightmeter on machines for manufacturing rubber products other than tires brought savings which were substantial, according to the Radio Instrument Company's research men, though not often so large as those for tire fabrication. The research engineers reported that the rubber company which was cooperating in the experiments probably could make effective use of 20 weightmeters. The engineers estimated further that if the 10 largest rubber manufacturers in the United States made full use of the weightmeter in their factories, 1,000 weightmeters would be required. According to the engineers, savings amounting to millions of dollars would result from such use of the machines.

The manufacture of inner tubes for automobile tires afforded an example of the savings expected to result from use of the weightmeter. Inner tubes were sold to dealers as being of certain weights, but actually the tubes usually varied above or below those weights. A tire manufacturer had to keep the variations below the standard weights within certain limits in order to satisfy distributors and consumers. It was generally conceded by manufacturers of inner tubes that, because there had been no effective means of measuring variations during the manufacturing process, there had been a tendency to make the tubes overweight in order to avoid any possibility of their being below the allowable minimum of variation from standard. Use of weightmeters, however, would keep variations in weight within very narrow limits. Thus, the manufacturers could save in raw material.

In cooperation with the affiliated paper company the Radio Instrument Company had experimented for nearly a year with the weightmeter and had succeeded in developing a device for automatically controlling weight of paper in process on a sulphite bond and sulphite "linen" paper making machine. The estimated saving through control of the weight of paper was less than the saving from control of weight in the rubber industry, both because the raw materials entering into paper were less valuable than rubber and because the manual control already developed in paper manufacture was better than that in rubber manufacture. The Radio Instrument Company's engineers estimated that the saving from the use on a sulphite bond and linen paper machine of the weightmeter, in connection with the automatic devices, would be about $5,000 a year. The paper mill superintendent, however, maintained that perhaps the same results in the control of the

weight of paper could be obtained by employing an operative whose sole duty was to control the weight of the paper as it was run through the machine. Such an operative, he stated, would be paid not more than $1,500 a year. The engineers of the Radio Instrument Company, however, who were well versed in the problems of paper manufacture, asserted that the precise control of weight that they had demonstrated could not be attained except through the use of a precision instrument such as the weightmeter, and pointed out the fact that although such control had long been desired, it had never been achieved theretofore.

In the paper industry, the savings for each machine from control of the weight of the paper would vary substantially with the quality and the quantity of the paper passing through the machine. The engineers of the Radio Instrument Company, however, roughly estimated that the average savings would be approximately $5,000 a year for each machine equipped with a weightmeter and with automatic controls attached thereto.

Control of moisture content was as important in the paper industry as control of weight. One large manufacturer of newsprint had experimented unsuccessfully for several years trying to develop a hygrometer which could be used to control the moisture content of paper. Engineers and executives of this company estimated that ability to hold the moisture content constant would be worth $100,000 a year for each large modern newsprint machine of the company. One manufacturer of newsprint had six newsprint machines; most other paper companies had a smaller number. Newsprint machines were of enormous capacity. Savings to be realized through control of moisture content for other types of paper were not so large reckoned by machines. Nevertheless, the average potential saving for each such machine was estimated to amount to thousands of dollars a year.

The Radio Instrument Company realized that the estimates of its engineers might be subject to skepticism and disagreement on the part of the engineers and executives of the manufacturing companies which were potential users of its machine.

The Radio Instrument Company was a subsidiary ot a paper manufacturing company. The executives of the subsidiary company had had no experience in the manufacture and marketing of precision instruments, and the company did not have factory facilities for the manufacture of such instruments. The first in-

struments with which the company experimented under operating conditions were assembled for the company by a manufacturer of electrical apparatus. Certain of the castings were made according to drawings and specifications provided by the Radio Instrument Company, but the rest of the device consisted mostly of standard radio and electrical parts. Officials of the Radio Instrument Company estimated that the instruments could be manufactured by the present maker on order in lots of 100 or more at a price of from $600 to $700 apiece, billed to the Radio Instrument Company. While some savings in manufacturing costs might be expected from increasing the volume of output of the machines, such savings would not be large. Moreover, the maximum number of machines which might be sold would be relatively small, so that saving by quantity production was not a consideration in the manufacture and marketing of the device.

The basic principles of the invention were fully covered by patents not yet litigated, but apparently remarkably strong, and the company employed an able patent attorney and an engineer who was an expert in patent procedure to keep the new developments covered by patent applications.

The company's instrument had no direct competition. Other mechanical weighing devices had been on the market for several years available for similar service in particularly suitable fields, but they were said to be complicated and delicate, lacking in precision even when new, and likely to go out of adjustment. These competing machines were sold outright for $1,500 each, but only a few had been sold and some of these stood idle.

Executives of the Radio Instrument Company at first had planned to sell the weightmeters outright to users. They had discarded this plan, however, their reasons being that the number of the instruments needed in industry was limited; that new and important applications of the device constantly were appearing; that a price commensurate with the value of the instrument to an industrial firm might be so high that the firm would not purchase; and that the instrument did not have the same value to different industries nor for different products in the same industry.

The executives also had considered leasing the instrument at a fixed rental. They had rejected this plan, however, because a uniform rental per machine would have to be based on the instrument's value to manufacturers finding it least useful rather than

on its value to those firms where it effected the largest savings.

It also had been suggested that the company should sell the machines on a royalty basis with a uniform initial charge sufficient to cover the cost of manufacturing and installing the instruments and a royalty charge for each unit of product manufactured, the royalty charge to vary for different products in accordance with the value of the machine in their manufacture. In talking with officials of rubber companies, however, executives of the Radio Instrument Company learned that some, at least, of the rubber companies would object strongly to a royalty basis because they did not wish to release production figures. Manufacturing processes differed between companies, furthermore, so that it was difficult to apply a uniform royalty to similar products of different companies.

The Radio Instrument Company also had considered placing the instruments with companies at a uniform initial charge plus an annual charge equal to one-tenth the savings resulting from the use of the machines. The company, however, had encountered difficult cost accounting problems in an experimental attempt which it had made to determine definitely the savings resulting from the use of the instruments in the plant of the cooperating rubber company. It also would be difficult to arrive at agreements with users as to the savings effected. Processes in manufacturing constantly were changing, and the use of the instrument might cause further cost-reducing changes, the savings from which could not be attributed entirely to the weightmeter.

The president of one rubber manufacturing company whom the executives of the Radio Instrument Company approached was of the opinion that the price of the machine should not be based upon probable savings to users. This executive held that the weightmeter was merely a precision instrument to indicate variation from standard and that any saving that was effected would depend upon the use made of the information supplied by the weightmeter in controlling operating processes. He stated that if the Radio Instrument Company developed automatic devices which of themselves would control manufacturing processes, then the company could expect to share in the saving effected.

In January, 1927, it appeared advisable to executives of the Radio Instrument Company to get into operation as many as possible of the machines with merely the indicator instrument and

without the recording graph or automatic control devices. The executives were confident that a company had only to use the indicating machine to realize its value. They proposed to make an installation charge large enough to cover the costs of manufacture and installation and in addition to charge a fixed annual rental. The fixed annual rental probably would not be the same for different industries, but would vary roughly in accordance with the value of the weightmeter in the industries. Whether there should be variation in the rental charge between installations in the same industry was undecided. It was proposed to put into the contract with lessees a provision that no recording devices or automatic controls were to be used in connection with the weightmeter except with the cooperation and express approval of the Radio Instrument Company. The company expected to make additional charges for the use of recording and control devices in connection with the precision instrument. Such charges, it was anticipated, would be varied in accordance with the value of the devices to users, so that the Radio Instrument Company would benefit in proportion to the economies effected. The inventor of the instrument already had worked out an automatically controllable rubber calender feed, and one had been built, but not yet tried out, as of January 1, 1927.

The company planned to have an adequate repair service department and to provide expert repair service to users at cost.

COMMENTARY: The most serious question raised in this case concerned the price at which the weightmeter was to be sold or leased. Several other questions were involved, to be sure, but they were more easily disposed of than the determination of the price. The question of whether to lease or to sell outright was of vital interest. Provided the right terms were fixed, however, the company very likely would have found it practical to offer prospective customers an option between leasing and outright purchase.[3] The same basic question arose, moreover, in determining lease terms as in fixing prices for outright sale. That question was whether to charge varying rates for different uses.

In determining the terms of sale or lease, the company was concerned with two sets of factors. On the one hand was the cost of making and selling the weightmeter, including, of course, all experimental and patent expenses. The price had to be high enough to cover the cost, if the enterprise was to succeed. On the other hand, the savings to be realized by the use of the device were to be reckoned. The buyers

[3] See Carton Machinery Company, page 533.

obviously could not afford to pay more than the savings that would accrue to them. The fact that the potential savings varied, however, not only between industries but between various uses in the same industry placed a variable upper limit on the price to be set; that was the genesis of the problem.

The protection granted to an inventor by the patent laws shows clearly the purpose of the government, as a matter of public policy, to foster invention by granting the inventor of a new device the privilege of charging monopoly prices for it during the life of the patent. It is entirely proper for a patentee, therefore, to set such a price or prices on his invention as will enable him to reap as large a reward as possible. Hence, the Radio Instrument Company was following a proper course in setting its prices primarily with reference to the savings to be effected by the use of the weightmeter. Those savings were so far above the cost of manufacturing and selling the device that, under the circumstances, cost was not a determining factor in fixing the price.

The variations in the savings to be effected by the use of the weightmeter on different installations and in different industries afford a concrete example of the manner in which the utility of an article varies under different circumstances. Some aspects of the subject of the influence of varying utility on the determination of value and price have been discussed extensively by numerous writers on economic theory. It is to be noted in this case that on a large calender in a rubber factory the savings were estimated at $100,000 a year; on some other calenders at $30,000 each per year; and on a much larger number of calenders at $10,000 each per year. In the paper and newsprint industries the estimated savings per instrument per year ranged from $100,000 down to $5,000 and an indefinite minimum of "thousands of dollars."

The promoters of the enterprise apparently were of the opinion that the price should vary according to the use to which the machine was to be put. Inasmuch as the savings would be much larger in some uses than in others, such a policy seemed to be a proper means of obtaining the full benefit of the patent rights.

The case in favor of a varying levy depending upon the use of the machine, however, was not to be disposed of so simply. There was much to be said in favor of a flat rate, even though that rate was fixed by the least economical purpose for which the instrument was sold or leased. In the first place, the same type of instrument was to be used for all the various purposes. Secondly, the variations in utility were not in any way peculiar to this device; they occur in the uses of practically every article of commerce, even though they do not often stand out in so clear objective as in this instance. The general experience in industry is that a flat price is more satisfactory and more

practical than a varying price, and there is no convincing evidence that such a conclusion should not have been reached in this instance.

The positive advantages of a flat levy for this instrument can be stated briefly as follows. There was lack of agreement as to the savings to be made in the various uses; hence, varying rates meant continual disputes with prospective customers. Conditions were continually changing in the industries where the device could be used, moreover; thus, continual changes in rates would be necessary if varying rates were charged. The machine was not indispensable, and a user who was asked to pay more for the use of the machine for one purpose than for another would feel that he was being exploited and would become antagonistic; thus, sales resistance would be engendered. In this instance, as in so many others in business relations, the emotional factors were likely to play a large part and the most fruitful course would be one that avoided the arousing of antagonistic sentiments. Unless expensive and probably offensive means of inspection and control were adopted by the Radio Instrument Company, furthermore, a user would obtain the machine for one purpose and use it for another, if the rates varied. I doubt if that eventuality could be guarded against successfully by the Radio Instrument Company. If it could not, the scheme of varying rates could not actually be carried out. Finally, by charging a flat rate instead of a varying rate, the fact that for a few purposes large gains would accrue to the users would aid greatly in securing sales momentum, thereby stimulating sales for other purposes. That sales momentum very likely would more than counterbalance the loss of income that might have been obtained by charging higher rates for the more profitable uses. Thus, a flat rate not only had the merit of avoiding the arousal of emotional antagonism but it also could be utilized as a strong positive influence in promoting sales.

The reasons for using the same flat rate for all industries were not so evident as those for having only one rate within an industry. The easiest course in selling, nevertheless, was to have the same price for all purchasers, whatever the industry or use. Thereby a broad program of sales promotion could be undertaken in which attention was focused on the merits of the machine rather than on trading for price. A uniform price, not subject to trading, inspires confidence in the seller and that confidence was essential in this case. My conclusion, therefore, is that the instruments should have been sold or leased at a flat rate.

The question of the methods and terms of sale for the automatic control devices that were being developed is not taken up here. A discussion of that subject with so many facts undetermined would be premature.

February, 1927 M. T. C.

Carton Machinery Company[1]

MANUFACTURER—PACKAGING MACHINERY

Leasing—*Use of Both Lease and Outright Sale.* Previous to 1910, the company, a leading manufacturer of packaging machinery, had distributed its product to manufacturers of packaged goods under 10-year leases. From 1910 to 1926, however, because of a change in trade custom toward outright purchase, the company offered its machines for either purchase or lease. Although the company made more profit by leasing its machines than by selling them outright, it decided to continue offering them for either purchase or lease. Since it did not have a monopoly through patents or designs, it was unable to enforce acceptance of lease terms in the face of increasing trade preference for purchase, and it did not wish to give up the lease system entirely, because only by this method could its product be made available to companies of small capital.

(1926)

From its organization in 1890 until about 1910 the Carton Machinery Company had leased its packaging machines to manufacturers of packaged products for periods of 10 years. The custom of the trade at that time was to distribute practically all packaging and wrapping machinery under leases; the users of the machines ordinarily preferred a lease contract to an outright purchase. After 1910, however, many of the larger users of packaging machinery had offered to purchase the machines. In order to conform to this change in trade custom, the Carton Machinery Company then had offered its machines for either purchase or lease. The relative number of machines distributed on leases as compared with the number sold outright had diminished steadily until in 1925 the number of leased machines represented only about 10% of the total number of machines distributed during the year; 10 years previously the machines distributed on lease had amounted annually to about 75% of all machines distributed. In 1926 the company debated whether to attempt to increase the number of machines leased or whether to discontinue the leasing system.

The Carton Machinery Company manufactured packaging machinery to fill, seal, and label packages. The machines were

[1] Fictitious name.

adapted for use in packaging any sort of dry, free-flowing material, such as flour, cereal, and coffee. Since the capacity of such machines was in excess of 15,000 packages a day, and since the unit price ranged from about $2,500 for a single-operation machine to $20,000 for a set of machines performing all packaging operations, the market for the machines practically was limited to large manufacturers of nationally advertised products. The company had less than 500 regular customers. Sales were over $1,500,000 in 1925. During the preceding five years the company had spent annually between $100,000 and $150,000 in development work to improve its machinery. The sales organization of the company was small, consisting of four branches with one or two salesmen and a field service man at each branch. Salesmen were paid a commission of 5% on sales. On lease contracts salesmen received the 5% commission figured on the total income to be secured from the lease during the 10-year period.

Although the Carton Machinery Company was one of the leading manufacturers of packaging machinery, it never had had a monopoly through designs or patents. At least two competing companies manufactured complete lines of packaging machinery which performed the same functions as the machinery of the Carton Machinery Company. These competing companies usually followed the same practices as the Carton Machinery Company in regard to terms of sale.

The lease contracts granted by the company during 1925 did not differ materially from those drawn up during preceding years. Each contract provided for a lease of 10 years. The lessee agreed to make an initial payment amounting to 35% of the selling price of the machine, and to make equal annual rental payments of such amount that the total payments which the lessor received in the 10 years would amount to 10% more than the initial selling price, plus interest at 6% on the unpaid balances over the 10-year period. The contract was so drawn that in case of bankruptcy of the lessee the Carton Machinery Company could recover the machinery and present a claim which ranked with those of other creditors for the balance of the 10-year rental. At the end of the 10-year period the lease could be renewed or the machinery could be returned to the lessor.

The Carton Machinery Company rendered installation service and advice through its field service men for a charge of $15 a day.

Service men at all times were available at the branches, and a lessee could secure repair services by paying a service man's transportation expenses to and from the nearest branch and $15 a day for the time which he spent in making repairs. The use of service men was necessary only for major difficulties and for overhauling. Most of the day-to-day adjustments and minor repairs could be cared for by mechanics in the lessees' factories. The Carton Machinery Company kept a stock of repair parts which a lessee could purchase, and the company agreed to replace, free of charge, any parts found defective within a year of the start of the lease and any parts which became unfit for use on account of wear during the term of the lease. The value of the repair parts required during the 10 years of a lease normally amounted to about 1% of the original value of the machine. The company did not furnish free repair parts for machines sold outright. Outright purchasers paid the same charges as did lessees for the assistance of service men.

From the standpoint of the Carton Machinery Company, it was more profitable to lease the machines than to sell them. The financial risk involved in leasing the machines had proved relatively small, and over a period of years this risk had been decreasing as the companies which manufactured food products became stronger financially. On a leased machine the company secured over a 10-year period an additional 10% of the selling price of the machine and received the usual rate of interest as a financing charge. At the end of the 10-year period, the machines usually were in good operating condition but had little more than scrap value, since improved models usually had been introduced which made the older machines partially obsolete. In many instances, however, lessees at the end of 10 years had renewed the leases on the machines for an additional 10-year period at the same annual rental payment. In most other instances the lessees at the end of the 10 years had purchased new machinery from the Carton Machinery Company to replace the leased machinery. The actual operating life of the machinery was from 15 to 20 years; and a few companies which had purchased machinery outright still were operating machines purchased 15 years before.

The officials of the Carton Machinery Company attributed the change from leasing to outright selling in the packaging machinery trade to changes in economic conditions during the years 1910

to 1925. Prior to 1910 the companies which used packaging machinery for the most part were relatively small and had limited capital. Most food products then were sold in bulk, with the result that many companies manufacturing food products had not developed wide distribution for their goods or recognition for their brands. Because of their limited capital, these companies preferred to lease packaging machinery. A manufacturing company which used packaging machinery often had secured a greater return on its capital by employing the capital in other phases of its business and by leasing the packaging machinery at a cost which over a 10-year period was higher than the purchasing price. After 1910, as the food products companies increased their capital resources and widened their distribution, they became increasingly desirous of purchasing packaging machinery rather than leasing it. As these manufacturers grew, packaging machinery came to represent a relatively smaller part of their total investment in plant and equipment.

The Carton Machinery Company's sales had increased steadily after 1910. The annual gross receipts of the company from sales and lease rentals had increased from about $270,000 in 1912 to over $1,500,000 in 1925. During this same period, the total value, after depreciation, of machines leased had fluctuated between $650,000 and $700,000. The company depreciated the value of the leased machines on its balance sheet at the rate of 10% a year, so that the value of a machine was written off entirely at the end of the 10-year-lease.

The company decided to continue offering its machinery either for lease or for outright sale, since it was not in a position to compel the acceptance of lease terms against an increasing trade preference for outright purchase. The company believed it should continue to offer lease terms in order to make its high-value machinery available to companies of small capital.

COMMENTARY: This problem raises the question of the use of the lease as a marketing tool in place of the contract for outright sale, and throws some light upon the conditions under which the lease may operate as a marketing tool.

From the standpoint of a selling company, the chief motive for the use of the leasing system in preference to outright sale is usually that of gain. If conditions are such that a company can induce a lease of its product in place of purchase, then frequently a larger gain may be

obtained than would occur from outright sale. Such was the situation with the Carton Machinery Company. Under the terms of the contract, as outlined in the case, this company received a greater profit under the leasing contract than it did from outright sale.

Moreover, under the terms of its lease, the Carton Machinery Company was assured that the full value of the machinery would be absorbed during the life of the contract. In other words, the company was free from the risk of obsolescence of leased machinery.

In spite of the fact that it might have made a larger profit by distributing its product under a leasing plan rather than under the program of outright sale, this company had made a rapid change from the leasing system to outright sale during the period from 1910 to 1926. To find the explanation of this change, it might be well to examine some of the reasons to which the use of the leasing system frequently is ascribed.

One reason frequently given is that for certain products marketing or distribution is easier under the leasing system than under the plan of outright sale, because a large initial outlay is not required of the lessee. For example, the United Shoe Machinery Company has stated that the large initial price which would have to be placed upon its machines, in order to absorb the charges incident to research and development, would greatly limit its market under a plan of outright sale. In other words, many small operators would not be able to purchase outright such machines. They can, however, afford to pay a royalty upon the products manufactured by the machinery.

Such apparently was the situation in the early stages of the sale of the automatic packaging machinery of the Carton Machinery Company. As stated in the case, prior to 1910 the companies which used packaging machinery for the most part were relatively small and had limited capital. Because of their limited capital these companies preferred to lease packaging machinery.

After 1910 this cause ceased to operate. The companies were large enough to purchase the machinery and preferred to do so. To be in a position to refuse such requests for outright sale, the Carton Machinery Company would have needed a monopoly of packaging machinery through patents or a virtual monopoly through possession of a greatly superior product. As a matter of fact, although the company was a very important factor in the packaging machinery business, it did not have a monopoly. Users of the machinery could turn to other manufacturers, who, in order to gain sales, probably would be willing to break away from the leasing system. Not having controlling patents, the Carton Machinery Company was not in a position to force leasing. Its position may be contrasted with that of the United Shoe Machinery Company which, through the control of basic patents, has possessed virtually a monopoly for certain types of shoe machinery.

Another motive that has often led to the employment of the lease in place of outright sale, is the desire of a manufacturing company to control the supplies and to safeguard the repair service for its products so that the reputation of the products may not be impaired. For example, until the Clayton Act was declared by court order to prohibit such terms, the United Shoe Machinery Company specified that only supplies purchased from it should be used in the machines which it leased. Manufacturers of tabulating machinery have specified that only their own tabulating cards shall be used in their leased machines. Under the common law such restrictions were permitted under a leasing system, whereas they were not permitted under a contract of outright sale; but the Clayton Act has done away with this situation. The argument for the control of supplies and repair service in such cases is that the use of other supplies or repairing might impair the machinery in such a way as to injure its reputation.

This argument for the use of the leasing system to provide control of service and supplies did not apply in the case of the Carton Machinery Company. In the first place, the company did not sell supplies to be used on the machines. In the second place, the company necessarily found it advisable to permit users of its machines to make ordinary adjustments and repairs upon the machines. Such machines were employed only in large plants, which ordinarily had mechanics on the force capable of making the necessary day-to-day repairs and adjustments. Moreover, the users of the machines were widely scattered, and it would have been uneconomical for the Carton Machinery Company to attempt to maintain a repair force which could give the quick service that is required in industrial operations. In the case of the United Shoe Machinery Company, the manufacturers using its machines usually are located in a few shoe manufacturing centers, where service stations can be established to serve the community.

Another motive for the use of the leasing system closely allied to the first one mentioned, namely, the larger gain to be had under the leasing system, comes from the desire to prevent the development of a second-hand market for the product. For example, the Bradstreet rating service is not sold outright but is leased. The volumes which are delivered periodically are left only after the old volumes are taken up. The lessees of the service agree not to permit the volumes to go into other hands. If outright sales were made, the older volumes would set up competition with the current publications of the company.

This motive of preventing a second-hand market might apply to some extent in the case of the Carton Machinery Company. Customers buying machinery outright might, when they purchased new machines, sell the old machines to other users. Moreover, a plan of outright sale might tend to reduce the market for new machines by encouraging customers to use the machines for more than the 10-year period pro-

vided under the lease. Operating against such a second-hand market is always, of course, the relative inefficiency of the obsolescent machinery. As pointed out before, however, even though the Carton Machinery Company might have preferred the leasing system as a means of preventing a second-hand market, it was not in a position to force such a system upon consumers.

The situation may be summarized briefly as follows. The Carton Machinery Company probably would have made a greater profit under a leasing system than under a scheme of outright sale. To have been able to enforce the leasing system, however, the company would have needed to have a virtual monopoly. This monopoly did not exist; therefore it was well for the company to turn to a scheme of outright sale. On the other hand, it was a sound plan to make available to those who desired to use it the opportunity to lease machines rather than to purchase them, inasmuch as the smaller initial payments required under the leasing system enabled the company to place machines in use which would be disposed of with difficulty under a plan of outright sale.

May, 1926 N. H. B.

Lorry Company[1]

MANUFACTURER—MACHINERY AND TOOLS

Advertising—*Selection of Mediums.* Advertising by the company, a manufacturer of machinery and tools, consisted of advertisements in trade papers, the issuance of both general and special catalogs of its products at regular intervals, and the publication of instruction books on the processes performed by its machines. Because reports of its selling organization indicated a tendency for purchases of machinery and tools to be made by general executives rather than by the factory foremen and superintendents interviewed by its salesmen, the company considered supplementing its regular advertising by a campaign in scientific and management magazines, directed to general executives and directors of manufacturing companies and supported by direct-mail campaigns. (1925)

The Lorry Company was a well-established, progressive manufacturer of machinery and tools. This company, from its inception, had used advertising. During the early years of its existence, it had used circulars and bulletins to announce its products. From 1870 to 1925, it had issued a complete general catalog, at intervals ranging from one to five years. In addition it had issued separate catalogs of the various parts of its lines for those interested only in certain items. With the beginning of trade papers, it began to advertise in them until, in 1925, it was represented in practically every trade paper that was likely to be read by men interested in equipment such as it manufactured. Reports of the selling organization indicated that purchases of machinery and tools were being influenced more and more by the general executives of the purchasing companies, upon whom the salesmen of the Lorry Company did not call regularly. Previously, the superintendents in charge of manufacturing, whom salesmen visited regularly, had been looked upon as generally responsible for initiating the purchase of machinery and tools. Because of the reports as to the growing influence of general executives upon purchases of machines and tools such as the company sold, it was proposed, in 1925, to add to the regular advertising of the company a campaign in scientific and management magazines, such as the *Scientific American, Factory, Industrial Management,*

[1] Fictitious name.

Industry Illustrated, and *Management,* and to use direct-by-mail campaigns to supplement that advertising.

The company distributed nationally its heavy machinery and tools, either through its sales branches or through representatives to whom it granted exclusive territories. The smaller tools were sold directly to a large number of dealers, usually retail supply firms.

The company's industrial and trade paper advertising, which had been directed to users, had been descriptive mainly of the mechanical features of the products. If a user wrote to the Lorry Company for information, he was sent either a general catalog or a catalog of that part of the line in which he expressed an interest. The company sent copies of the general catalog and of the special catalogs to its regular customers and distributed the remainder, which formed the greater part of each issue, to prospective customers through its dealers, representatives, and selling branches. The company's salesmen, who worked from the selling branches, distributed catalogs to those members of manufacturing organizations with whom they came in contact and who seemed likely to be interested in the purchase of additional equipment.

The Lorry Company also issued textbooks of general information on particular mechanical processes. These were distributed to those companies interested and, to a limited extent, to schools for mechanics. These treatises contained some advertising of those products of the Lorry Company which could be used in connection with the points covered in the text. The company also published instruction books on the operation and construction of the machines it manufactured; it distributed these to the customers interested in those types of machines and sent one with each machine shipped from the factory.

Because the company valued its general catalog highly as a means of increasing its goodwill, in 1925 it determined to issue that catalog at least every two years. It planned to continue to issue its various catalogs indefinitely and also to continue the publication of instruction books and general treatises, revising them as frequently as necessary.

In 1924 the company had made its first systematic direct-by-mail campaign, upon which it had received several favorable comments from the trade. Over a period of 9 months it had issued 12 booklets, each describing one of the smaller tools which it

distributed through dealers. It had sent these booklets to a list, supplied by its salesmen, of the companies using such tools. Approximately 6,000 copies of each of the 12 booklets had been distributed. In conjunction with this campaign, the company issued a series of 12 stickers, each set reproducing in miniature the cover of one of the booklets. Two weeks before a booklet was mailed, stickers reproducing the cover were sent to the dealers for attachment to their letterheads and billheads. While no tangible results were traced to this campaign, favorable comment indicated to the company that other direct-by-mail campaigns of a similar nature would create additional goodwill and increase its sales volume.

The proposal to advertise in scientific and management magazines was based on reports from the selling organization that, in manufacturing companies, the tendency was for large equipment purchases to be made by nontechnical purchasing agents after authorization by vote of the directors, rather than made directly on the recommendation of the factory foremen and superintendents as formerly. Furthermore, by 1925, mechanics, it was stated, generally had ceased to take a personal interest in their machines or to urge the purchase of new machinery and tools when they were dissatisfied with their equipment or when they discovered different equipment which would do the work better.

The advertising manager of the Lorry Company thought that industrial papers did not reach the directors of manufacturing companies and that they reached only a part of the purchasing agents who controlled the purchase of such equipment as the Lorry Company manufactured. Nontechnical advertising in scientific and management magazines was proposed as a means of impressing the name of the Lorry Company upon the memory of directors, so that they would recall it whenever they contemplated the purchase of equipment. Although general publications, such as the *Saturday Evening Post,* might reach more of the general executives of manufacturing companies than the scientific and management magazines reached, they were rejected as mediums, because the waste circulation made the cost of advertising in them prohibitive.

It was recommended that the proposed advertising in scientific and management magazines be supported by direct-mail campaigns, presenting in a general way, to those reached by this

advertising and by the industrial paper advertising, the subjects on which technical booklets, catalogs, and treatises had been written. Instead of giving a technical treatment of the subjects, these circulars would endeavor to link the machine or tool involved with the name of the Lorry Company.

It was estimated that the cost of an advertising campaign in the scientific and management magazines, with supporting direct-by-mail campaigns, would be approximately $25,000 annually, of which $15,000 would be spent for the magazine advertising. An appropriation of $15,000 would permit the use, once each month, of from one-half page to a full page in the *Scientific American, Industry Illustrated, Management, Factory,* and *Industrial Management.* Because the Lorry Company operated its own photographic department, it did not need so large an appropriation as would a company which did the same amount of advertising but which had to purchase its art work from outside sources.

For several years prior to 1925, one-half of the annual advertising appropriation of the Lorry Company had been spent for space in periodicals, and one-half had been expended for catalogs, treatises, and booklets. While the company was able financially to make an additional expenditure of $25,000 annually for advertising, it contemplated decreasing its expenditures for industrial paper advertising by decreasing the size of some of the insertions. Insertions in the industrial papers varied in size; some occupied small space, while others filled single or double pages. The company believed that it could take somewhat smaller space in those papers where it used single or double pages, without incurring a great loss of attention.

The company believed that its existing advertising policy did all that was possible to influence the technical men who were directly involved in production to regard favorably the products manufactured by the Lorry Company. An increase in the existing type of advertising, therefore, was not an alternative to the new policy proposed.

COMMENTARY: This case is illustrative of the too frequent attempt to determine important advertising procedure even though important data are lacking. To determine its selling and advertising procedure, the Lorry Company should have had knowledge both of the buying habits of industrial buyers for its equipment and of the reading habits

of those buyers.[2] It should have known who was likely to suggest the need, the type, and the brand for equipment such as it manufactured, who would consider purchase, who would approve purchase, and who would make final decision on purchase. Beyond this, it was advisable to have quite definite information upon the reading habits of those who should have been influenced. The company should have secured this data before acting upon the recommendation of the advertising manager, which was made on the basis of meager information.

February, 1928 N. H. B.

[2] Some light is thrown on buying habits for certain types of industrial goods by a field survey report, *Who Buys for American Industry*, published by the A. W. Shaw Company, Chicago, and by the booklet, *Industrial Marketing*, published by the McGraw-Hill Company, New York City.

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